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THE DANUBE-AEGEAN
WATERWAY PROJECT

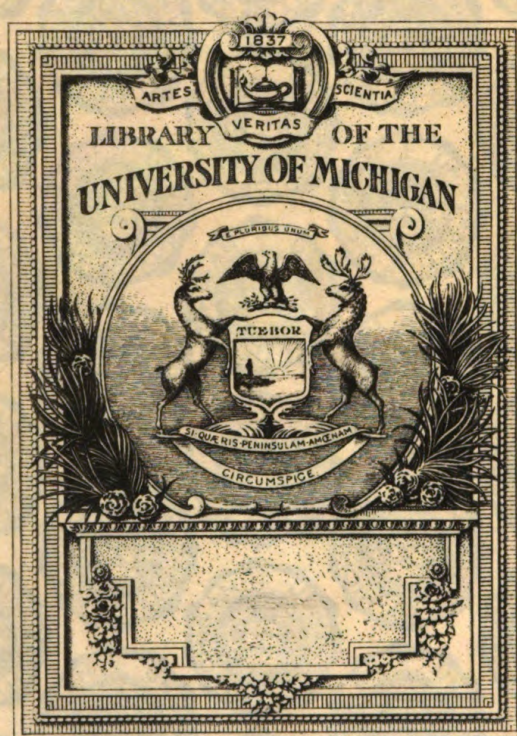
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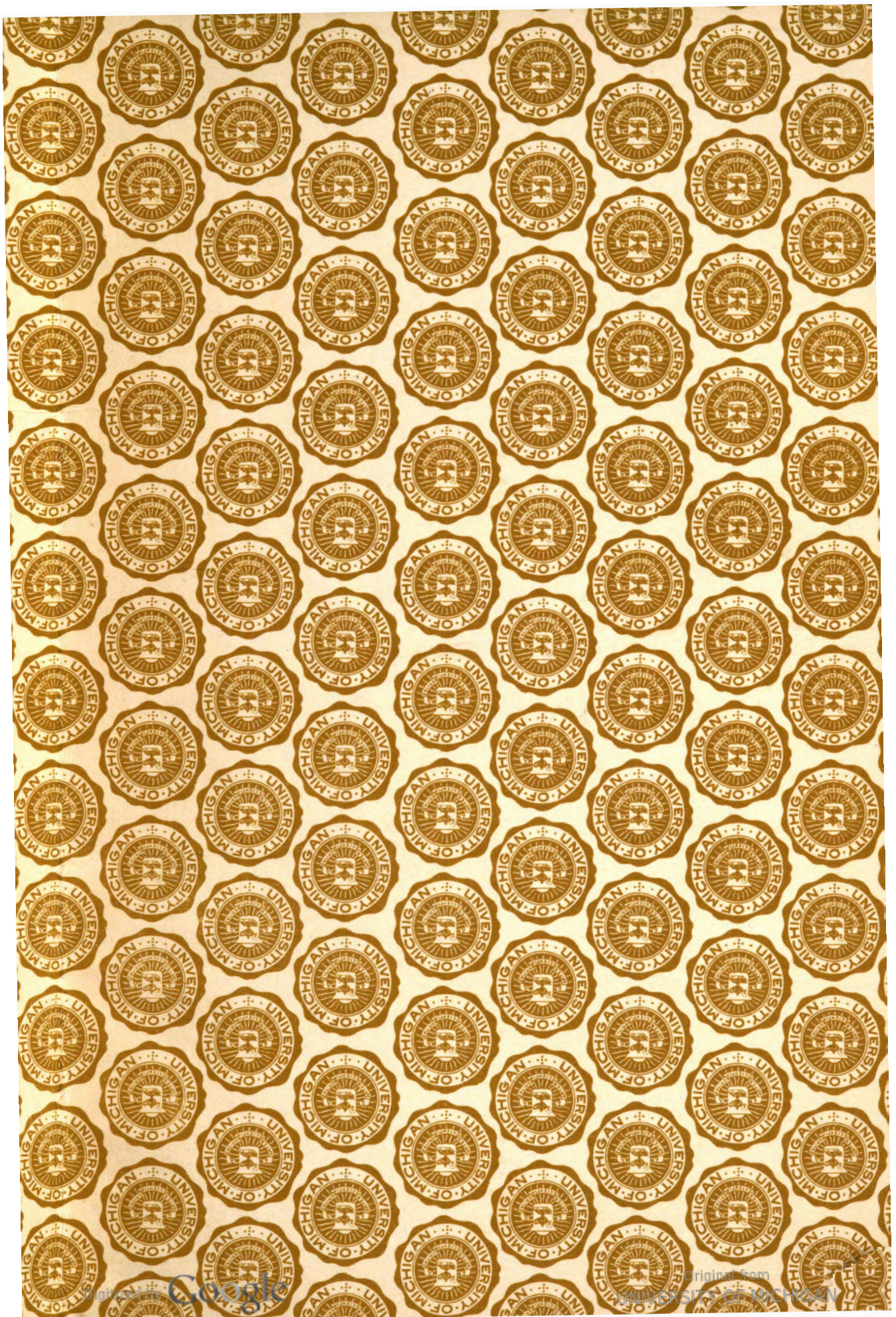
BY

PRINCE LAZAROVICH-HREBELIANOVICH

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THE DANUBE-AEGEAN WATERWAY PROJECT.

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The Danube-Aegean Waterway Project

A PAPER

BY

Prince Lazarovich-Hrebelianovich, *Stephan Lazarov*
Eugene, prince

Arranged and Edited

by

Mara de Czernucki-Lazarovich-Hrebelianovich

The Unionist-Gazette Association
Publishers and Printers
Somerville, New Jersey

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INTRODUCTION.

BY THE EDITOR.

In 1920 my father presented to the American Society of Civil Engineers a paper entitled the "DANUBE-AEGEAN WATERWAY," giving a description of the work, the general project and the interesting history of its inception.¹

That project was first brought to the attention of the English-speaking public through a report made by the American Consul General at Constantinople, and published in the number of July 7, 1909, of the "U. S. Consular and Trade Reports." Since then many notices and references regarding it have found their way into print,² but a complete descriptive story of that project had not yet been published in printed form. It was for a long time my desire to make this, my father's work the subject of a book. A desire rather hard to realize as the paper in the form he presented it to the American Society of Civil Engineers required amplification taken from his political correspondence, and my father had several years ago refused an offer to publish his recollections together with his correspondence covering the last thirty years. Now, there appeared during the last few months in Yugoslav papers various reports stating that the Yugoslav Government decided to undertake regulation and canalization works on the Morava River; works that formed integral parts of my father's Danube-Aegean Waterway project. The book seemed timely. The newspaper reports were convenient excuses, and a compromise was finally arrived at, and that compromise is the present book.

My father, Eugen (Lazar) de Czernucki-Lazarovich, Prince Hrebelianovich, was born in Croatia, Jugoslavia, as the son of Francis de Czernucki, an officer in the Austrian army, who came from a family of Serb origin, which in the sixteenth century settled in Hapsburg lands and

¹ Proceedings of the American Society of Civil Engineers for 1920: "Danube-Aegean Waterway," by Prince Lazarovich-Hrebelianovich, N. Y. Typewritten manuscript, 80 pp. maps, illust. tab. 12x9 (presented by the author). The plan for constructing the proposed Danube-Aegean Waterway from the Danube in Serbia, using the Morava and Vardar rivers, to Salonika on the Aegean Sea, was initiated by the author and presented by him to the Serbian and Turkish Governments in 1909. In this book the author has presented the history of the project, together with its political, economic, financial and engineering aspects.

² "Servie an de Serviers," by Gos de Voogt, published Rotterdam, Holland, 1913, under the auspices of the Royal Serbian Ministry of Agriculture, Commerce and Industry (pp. 73-4).

U. S. Consular Reports, Nov. 10, 1919, p. 786, reports of U. S. Trade Commissioner to Greece

"Belgrade Economic and Financial Review," November, 1923, article by Chief of Department of Waterworks, Ministry of Agriculture, pp. 13, etc., etc.

H. A. D.

there obtained in 1583 a patent of nobility from King Rudolph of Bohemia and Hungary (Emperor Rudolph II, 1552-1612). My father's mother was Odilia Lazarovich, Princess Hrebelianovich, whose father had been a cabinet member in the autonomous Croat Government. Aside from Slav blood—Serb, Polish, Russian and Czech, with an admixture of French, German and Magyar,—my father has also inherited Spanish blood through his maternal grandmother, who was Doña Maria de Guzman, of the line of the Dukes of Olivarez, Grandees of Spain.

Most girls are by nature hero-worshippers, and I am one of them. My hero up to now at least is my father. As a girl in writing about her hero is liable to transgress the canons of writing history, I think it best to have my father tell himself the story of his life. Two papers may accomplish the purpose. In deleting all matters of secondary interest in those papers a readable connected whole was obtained which I think may give a clear outline sketch.

The first of those papers is a statement given by my father in 1904, by request, to Sir Henry Drummond Wolff, Privy Councillor, Member of Parliament, former British Ambassador, etc., and reads as follows:

. . . Shortly after the Hungarian Revolution of 1848-49, my grandfather Lazarovich settled in Croatia, where in 1868 he entered as head of department the newly created autonomous Croat Government. . . . The death of his only relative, a cousin, in 1869, in the United States, left my grandfather the last direct male representative of his family. His only son had died in Hungary in 1848, and of his daughters only my mother had survived. My mother Odilia Lazarovich Hrebelianovich, married in 1863 to Francis de Czernucki, captain afterward colonel in the Austrian army, had two sons, myself and my younger brother, who later died in 1876. To insure continuity of name and tradition of the family, my grandfather decided to transmit name and titles, with all other rights to us, his grandsons. . . . The principal of those titles, the title of "Dux Sancti Sabae," Duke of St. Sava, or in Serb, "Herceg Sv. Save,"^{2a} had for more than two hundred years, up into the eighteenth century been worn by the head of the family in Croatia, Hungary, Poland (Lithuania), and Russia after the "Hercegovina" (Dukedom of St. Sava) had in 1483 been conquered by the Turks. Several members of the family had held in Hungary the great State Dignity of "Baronis Regni."

^{2a} The title as transcribed from old documents reads in its latin form (doc. of 1455): "dei gratia dux Sancti Sabae, dominus terrae Huminis maritimarumque partium, comes Drine," etc., in the Serb form (doc. of 1453): "Herceg od Svetoga Save, Gospodar Humski i Primorski, Knez Drinski . . .," which both Latin and Serb text read in English translation: "By the Grace of God, Duke of Saint Sava, Lord of Hume and the Coastlands, Count of the land of the Drina," etc.

An old friend of my grandfather, a judge of the "Court of Seven Judges" (Supreme Court of Croatia), Septemvir Velitchkovich, a Serb by nationality, took charge of this matter—transmission of name and titles to us children, and of obtaining the necessary confirmation from the Hungarian King, who also was King of Croatia, Francis Josef, and the Hungarian Government. The answer of the Hungarian Government to the initial steps taken in this matter by Septemvir Velitchkovich, was negative and at the same time it was intimated that neither the Government nor the Hungarian Crown could permit any move towards claiming and reviving those titles in Hungary, as they, being territorial, had been incorporated into the titles claimed by the Crown of St. Stephen (Hungarian Crown) by an act of King Leopold I (Emperor Leopold I, 1640-1705). . . . Under those circumstances any further endeavor in that direction had to be abandoned in Hungary and only in 1892, twelve years after my grandfather's death my mother and I made another move toward obtaining permission to wear those old family titles in Austria. . . . That renewed demand (in 1892) came to the knowledge of ex-King Milan of Serbia, then living in Paris, who, it seems, took alarm. . . . Already since my grandfather's effort in 1870 to have the old family titles recognized in Hungary, the family was the object—off and on—of rather unwelcome attention from the Austrian as well as the Hungarian governments, but in 1893 that attention, presumably under King Milan's pressure became somewhat disagreeable. . . . In November, 1893, I received a one-year leave of absence from the army, and a few months later, in February, 1894, I resigned my commission in the army, which was accepted and my demand to be released from Austrian and Hungarian citizenship was granted. It would appear that this incident was the cause of an exchange of diplomatic notes between the Austro-Hungarian and the Serb governments. It is said that in its notes the Austro-Hungarian Government pointed to the action taken against me—resignation from the army, etc.—as acts of particular friendship towards the Dynasty Obrenovich in Serbia.⁸

⁸ Excerpts from letters (translations):

LEGATION ROYALE DE SERBIE
27 Pembroke Gardens Kensington, W
London, 4th November, 1895

Dear Monsieur de Czernucki-Lazarovich:

. . . . Today I received your letter in which you express your desire for me to be your witness at your marriage with Comtesse Marie Sérurier, and that if I could not myself attend I should be at least represented. If I were not in official position I should not hesitate a moment, but should consider it as the greatest honor and pleasure to be your best man at your marriage with the Countess. However, in my position as Serbian Minister in London it is absolutely impossible for me to do so.

It may perhaps be interesting to mention that during the same months of February, 1894, by a coup d'état King Alexander (Obrenovich) replaced the liberal constitution of 1888 by the restricted one of 1869, and that ex-King Milan, his father, returned to Belgrade from Paris, and assumed the supreme command of the Serb army. . . . In May of that year (1894) I left Austria-Hungary and a few months later, in summer I was elected fully empowered delegate of the Central Revolutionary Committee for the autonomy of Macedonia and Albania. . . .

The name LAZAROVICH (spelled also "Lazartowicz" in some documents written in Poland in the eighteenth century) was assumed about two hundred years ago and retained later as the general family name. . . . The name HREBELIANOVICH came into use towards the end of the fifteenth century as the family name of the descendants of "Hrebelian," grandfather of Lazar Pribtchevich Hrebelianovich, known to history as the last ruler of the Serb Empire, who lost life and crown in the battle of Kossovo in 1389, and who is the center figure of the great epic cycle of Serb national songs around that ill-fated battle. . . . Those two names represent two strains of descent from the great Serb ruler, which were united, some three hundred years ago, through the marriage of the heirs of the two families representing those strains. . . . Descent of the family from that great Serb ruler through his daughter is genealogically established and a matter of history.

It is not unknown to the Royal Serbian Government that certain theories exist, representing as possible and probable your descent from the Old Serbian Dynasty. These theories have already caused the known action of the Austrian Government against you, which action was notified to the Royal Serbian Government by the Imperial Austrian Government as being a special act of consideration toward the Royal Serbian Dynasty. I know perfectly that personally you make no pretensions. . . . The most probable consequence of my acting as your best man would be my immediate dismissal from my post as Serbian Minister in London. This consideration makes it necessary to my greatest and truest regret, as well as that of my wife, to refuse you. I wired you this morning to that effect. I beg you to accept this declaration and my excuses in a friendly spirit and further to believe in the truest sympathies of my wife and yours hastily,

TCHEDO MIJATOVICH,
Serbian Minister at London.

II.

LEGATION ROYALE DE SERBIE
7 Phillimore Gardens, London W
15th January, 1899

Dear Monsieur de Czernucki-Lazarovich:

. . . . King Alexander and King Milan, as well as his Government know of you and have spoken with me in September, 1897 in Paris about you. The Austrian Government has already tried formerly to take credit in the eyes of the Obrenovich Dynasty from the fact of your resignation from the Austrian Army. As a fact you are known at the Royal Court at Belgrade as a man who could eventually be a Pretender. . . .

Yours,

TCHEDO MIJATOVICH,
Serbian Minister at London

. . . . But family traditions also claim descent from a son of that last ruler of the Serb Empire. Which tradition, at present at least, is not supported by any historic documentary evidence, though the family believes that evidence supporting that tradition could probably be found in certain archives in Italy, Russia, Lithuania (Poland), and Moldavia. . . .

The so-called "great or long war" (1593-1606) between Turkey and an alliance of the Christian powers of Central and Eastern Europe bordering on Turkey, in which the Serbs of Hercegovina and Montenegro took part, and which war is known in Serb history as the great insurrection of St. Sava, practically wiped out the family. Only a few members escaped either massacre or death on the battlefield. . . .

The last attempt of a member of the family to regain the old lands and end the long exile was made in the last quarter of the eighteenth century by my great-grandfather Jan Lazarovich. Old correspondence in the family's possession indicates that Jan Lazarovich met in 1771 Cardinal Rohan, the French Ambassador at the Court of Vienna, whose special mission was to watch the first partition of Poland, and that he submitted to the Cardinal a plan to be laid before King Louis XV of France, suggesting that France could counterbalance the loss sustained through the partition of Poland in giving aid to the Serbs of Hercegovina and Montenegro then fighting against the Turks (the Russo-Turkish War of 1766-1774 was then on) and in erecting there—Hercegovina and Montenegro—a Serb State under French protection. . . .

A few years after my grandfather tried to have the old title of Duke of St. Sava recognized in Hungary, there appeared in Serb periodicals the following:

(1) A Serb weekly publication brought in August, 1875, the story of a conversation its editor had with V. Boghishich, then studying in Paris. Boghishich, now dead, had been Russian Councillor of State, was the author of the Montenegrin Code of Laws, and a writer on historical and legal subjects. The article said that Boghishich told of having found in a Paris Archive among papers of diplomatic correspondence dealing with Polish affairs a plan submitted to King Louis XV, urging that monarch to create a Serb State. One of the memoranda supporting that scheme dating from 1774 Boghishich said was signed by a General Count Schmettow.

Boghishich never published an account of that find himself, and approached on that subject refused all information.

(2) Chedomil Mijatovich, several times Serb Minister of Foreign Affairs, Minister of Finance, etc., author of the secret con-

vention between Serbia and Austria in 1882,—published in the Serb literary monthly “Javor,” in 1877, the first version of his story about “August von Lazar von Boyne.” A second version of that story he used as a plot for his novel, written in Serb, entitled “Rayko iz Rashine.” Another version of that story was published (1904) in the Century Magazine (Vol. LXVIII, new serial Vol. XLVI, pp. 240-246), under the heading: “A Curious Minnesota Romance.”

In that story, Mijatovich, tells how this Augustus von Lazar von Boyne, a German, came to Serbia to search for a buried treasure; how Boyne showed him some papers written in German, which described the picturesque life of Boyne’s grandfather, a man who claimed descent from the Serb ruler Lazar, and how Boyne, when questioned by Mijatovich about the old treasure, told that it consisted in part of the old Serb crown and regalia. Boyne died in Belgrade in 1877, without being able to locate the treasure. He left a large family of children in Minnesota, U. S. A. The story describes Boyne as an old man, very simple, who seemed to be uneducated.

In 1884 my mother and I received from a friend a copy of the “Javor” containing Mijatovich’s story about “Augustus von Lazar von Boyne.” This story aroused our interest and curiosity because of the following facts: (1) my grandfather’s only relative, a cousin, a graduate of the Academy at Eger (Erlau), Hungary, emigrated as a young man to America, where he died in 1869, without leaving children; (2) an old tradition of the family describes the place where in the fifteenth century the old Serb crown and regalia—the crown with which all the Serb kings from Stephen the “First crowned” to the last Bosnian king in the fifteenth century were crowned—was hidden and buried at the time of the Turkish Conquest. So, when a few months later I chanced to make Mijatovich’s acquaintance in Vienna, I spoke to him about his Boyne story, and what he told me then added little or nothing to the story as he had written and published it. In Vienna at the same time I also made the acquaintance of Madam Mijatovich. She was a Canadian by birth and had before her marriage to Mijatovich been the widow of an American lawyer of Boston, U. S. A. Some years later for reasons only known to himself Mijatovich tried, in spite of all evidence to the contrary, to identify Boyne with my grandfather’s cousin, and as he persisted in it, I finally suggested to him in 1898 to submit all the data he possesses on the Boyne subject to the great Serb historian and critic, the late Archimandrite Hilarion Ruvarac. I offered to do the same thing on my

side. But Mijatovich absolutely refused to entertain that suggestion.

The second paper a letter my father addressed in 1920 to the Consul General of the Kingdom of the Serbs, Croats and Slovenes in New York, may, I think, complete the outline of my father's life. The translation from the original Serb reads as follows:

Concerning the questions contained in your letter of October 9, 1920, *re*: My demand for passport made on February 9, 1920 I beg to state: My home, from my birth until my entering the Austro-Hungarian Army in 1880, was in Zagreb, Croatia. From 1880 on I belonged to the Austro-Hungarian Army till 1895, when I received my papers of honorable discharge from the army and my release from Austrian and Hungarian citizenship for the stated purpose to settle in the Kingdom of Serbia and become a citizen there. I requested and received this release under the following circumstances: In November, 1893, as the result of a personal and private affair with a member of the Hapsburg dynasty, I got one year's leave of absence from the army. . . . During the leave of absence, I sent in my resignation as commissioned officer in the army, asking also my release from Austrian and Hungarian citizenship. . . . My resignation was accepted and the papers containing my honorable discharge from the army and my release from Austrian and Hungarian citizenship were received by me in 1895. . . . Immediately after the receipt of my papers I submitted (in 1895) my demand for citizenship to the Serbian Government and at the same time handed all my papers to the competent department of the Serbian Government, from which in due time I received acknowledgment together with a receipt for fees, taxes and stamp duties paid. . . . For further information of the Government I desire to say that my papers remitted to the Government contained also a document which stated that in 1894 I was elected fully empowered delegate of the Central Revolutionary Committee for the autonomy of Macedonia and Albania, a committee in which I was interested since its start in 1886. . . . References to my work in the Macedonian committee can be found in the British Parliamentary Reports: Turkish Affairs: 1902-03, pp. 177, inclosure 213; 1903-04, pp. 307-09, corres. 378, inclosure 378; and also in the text and appendix of the (. . . .) book, the "Orient Question" (1913), which book also contains copies of several memoranda, which I had the occasion to address as delegate of the Macedonian committee to the British Secretary for Foreign Affairs. May I also draw the attention of the Government to my work in two volumes

published in England and in America (1910 and 1911) under the title of "The Serbian People, Their Past Glory and Their Destiny." I did not come to America until January, 1909. The year 1911 I was absent from America. I am a resident of the United States only since 1912. Further, the object of my coming to America was not to settle there, but was in the interest of financing my project of the Danube-Aegean waterway, a work of vital importance to the economic development of Jugoslavia, and towards the expenses of the preliminary studies, the general engineering project of that work, I personally contributed over ten thousand dollars (U. S. currency). To limit my liabilities in that regard I incorporated in the State of New Jersey, U. S. A., "The American Engineering Company," which in 1909 petitioned the Serbian and Turkish governments for permission to execute preliminary works of that engineering project. . . . My articles and other writings published during the last twenty years are too numerous to be cited, and I believe that they are not unknown to the Yugoslav Government. A perusal of the above-mentioned books alone will convince the Minister of Foreign Affairs, that my activities not only were not to the disadvantage of Serb and Yugoslav affairs, but on the contrary, I may be allowed to say, without being accused of self-praise, that my work was rather beneficial to Serb and Yugoslav interests.

The scope of my activities since 1894, as shown by the above books, and other works, was: (1) the driving of the Turk from Europe, (2) the extension of the Serb border southward across the old Serb lands, including the Vardar Valley from the Struma to the Albanian and Greek borders, (3) the break up of the Hapsburg monarchy, (4) unification of the Serb, Croat and Slovene race into one independent sovereign state formation, (5) the final formation of a Balkan confederation comprising all the Balkan States on the basic principle of "The Balkans for the Balkan Peoples.

The above citations only sketched a rough outline of my father's life, his interest and his work and a few details added may not be amiss. My father, during his service as an officer in the Austrian army, made in 1888 an original design for a quick-firing field gun. This design was the first to use the principle of barrel-recoil. Since then that principle has become the basis of design for all modern artillery gun material. After leaving the army, in 1894, my father turned to the study of history, economics, finance, and international law. His historical studies and writings which largely covered the field of Moslem conquest in Europe—touching Spain as well as the Balkans—were rewarded in 1911 by the

honor of his being elected a member (individuo de numero) of the "Academia Nacional de la Historia de los Estados Unidos de Venezuela," a government-supported learned society.

From England, where he lived after 1901, my father was between 1905 and 1908 a steady contributor to the great New York daily "The Sun." When war seemed imminent between France, England and Germany in 1906 as the result of a deadlock at the Algeciras Conference on Morocco, my father was asked by Mr. H. R. Chamberlain, the European editor of "The Sun" to go for that paper on a special mission to Berlin. There, thanks to the kindness and courtesy of the late Professor Theodor Schiemann, of Berlin University, he was able to obtain important interviews.⁴ His cable, published in "The Sun," an analysis and summing up of the political situation based on the information gathered in those interviews, was considered a great coup from a journalistic standpoint.

Just before leaving London for Berlin on his mission for the New York "Sun," my father received an interesting suggestion from Sir Henry Drummond Wolff, who as Privy Councillor was *ipse facto* a member of the British Government. That suggestion was, that if my father should find indications which would support the generally accepted view that Germany is ready to back its stand at the Algeciras Conference by force of arms if needed, he should approach the American Ambassador in Berlin and submit that mediation by the American Government might be appropriate, as in Sir Henry's opinion the British Government would welcome such mediation, but would not seek it. So immediately on his arrival in Berlin, before seeing anyone else, my father called on the American Ambassador Mr. Charlemagne Tower. The Ambassador gave it as his opinion that the Washington Government would certainly be willing to mediate in this crisis and that he, the Ambassador, would be ready to act should the situation warrant it. The interviews and a careful analysis of the situation convinced my father that Germany's stand at Algeciras was merely a clever tactical move in the game of international diplomatic chess, and there was no need for mediation. A conclusion which the later events at the Algeciras conference showed to have been correct.

Another incident occurred the same year but some months later. It was the subject of an editorial in the "North American Review," of 1918 (entitled "Footnotes to Austrian History," Vol. 208, pp. 174-180). The material for that editorial was furnished by my father.⁵

⁴ Prof. Schiemann, known for his studies on Russian-Polish history, was also the author of the series of articles headed: "Deutschland's Grosse Weltpolitik," which appeared regularly every Wednesday in the "Kreuz Zeitung," and which were considered to represent the personal views of the German Emperor.

⁵ "North American Review," Vol. 208, p. 632: ". . . I desire to add that the passages and material in your editorial were taken from my . . . MSS . . . entitled 'Contributions to the History of the Origins of the Present War.'"

As the language of the editorial is so clear and concise, I think I can do no better than use the kind permission given by the editor of the "North American Review," and present the story by citing from that editorial:

In 1906 the general situation in Europe seemed favorable to an Austrian scheme of conquest. Russia had just made peace with Japan after a costly and disastrous war and was in the throes of domestic reorganization after almost revolutionary disorders within the empire. Germany was at least sufficiently prepared for war to face it without hesitation, should occasion present itself. . . . Kaiser Wilhelm was well known to be peculiarly sensitive on the subject of regicide. Three years before he had been convulsed with horror and detestation at the killing of King Alexander and Queen Draga at Belgrade, and it was shrewdly reckoned that another such tragedy would be sufficient to provoke him into taking such action as would make war inevitable.

Now the regicide of 1903, while committed by Serbian army officers, had been brought about through the machinations of the Hapsburgs, and it was believed that the same agencies would easily be able to effect its substantial repetition. In the spring of 1903, therefore, an Austrian plot was organized to oust King Peter of Serbia from his throne, which, it was expected and even desired would involve the assassination of him and his family. . . .

There is some reason for supposing that Prince Mirko of Montenegro and his wife, the latter being a distant relative of the former King Alexander, had knowledge of the plot, though to what extent is not quite clear. At any rate, the Montenegrin court was counted upon to play a very important part in the drama.

For at that time the King and Queen of England were planning to pay a visit to Montenegro during their spring cruise in the Mediterranean, and it was arranged to have the "coup d'état" at Belgrade, which would doubtless involve murder of King Peter, occur at the very time when Edward VII was a guest at the Montenegrin court . . . and a general European war quite probable. . . . He⁶ immediately informed Sir Henry Drummond Wolff, and also Mr. H. R. Chamberlain, now deceased, who was then the chief European correspondent of the New York "Sun," and also of the Laffan Telegraphic News Agency. The three conferred together. They realized the extreme seriousness of the situation, and of course agreed that all possible means must be used to prevent the threatened catastrophe.

It seemed almost hopeless to undertake deterrent action in Lon-

⁶ My father.

don in time. The King and Queen were already sailing toward Cettigne. . . . It was decided, therefore, to lay the matter before the German Kaiser, as the one man in Europe, who would be able to prevent execution of the plot. . . . This was done, and at the same time Mr. Chamberlain made fullest possible use of the Laffan agency to the same end. It might seem invidious to declare whether the Kaiser or the news agency proved the more powerful. What is certain that together they effected the desired purpose. King Edward suddenly "changed his plans" and did not visit Montenegro, while various more or less mysterious gentlemen who had been visiting Belgrade suddenly departed from the Serbian capital for a holyday in the Tyrolean Alps. And the war was postponed for eight years; until another royal or imperial assassination conveniently occurred.

In America in addition to giving series of lectures on "International Political Problems" in institutions of learning, like Leland-Stanford University, New York University, Williams College, etc., my father, as a graduate of an engineering college, followed the engineering profession, and a number of his writings on technical subjects—railroads, power, etc., have been published in American engineering periodicals.

My father married twice. First, in 1895, my mother, who was Marie Louise Lucie Charlotte Sérurier, the only child of Comte Louis Sérurier, captain in the French army, and last male descendant of the Maréchal et Pair de France, Comte Mathieu Sérurier, who lies buried in the Invalides in Paris at the side of Napoleon I. My mother's grandfather, Comte Charles Sérurier, a member of the Conseil d'Etat, was French Commissioner presiding at the first Congress of the Geneva Convention (Red Cross Convention). He, together with the Duc de Fezensac, founded the first Red Cross Society (*Société de Secours aux Blessés des Armées de Terre et de Mer*). He also originated and founded the Hospital Ambulance and First Aid service in Paris, and afterwards helped organize that service in other European capitals. In New York that service was organized by his secretary, Dr. Nachtel. Count Charles's father, Louis Sérurier, Comte et Pair de France, was twice French Ambassador to the United States, and was Napoleon's High Commissioner in Holland.

My mother died in 1900, a few months after I was born, the youngest of three. My two brothers, Doushan-Stephan, and Lazar-Stephan, twins, were born in 1896 in Paris, France.

A few months after my mother's death my father left Algiers, a widower with three little children, one, myself, still a baby in arms. After laying my mother to rest in the family vault in the Père La Chaise

in Paris, he went to England (1901), where his duties as delegate of the Macedonian Committee called him.

Two years later in London (1903) he married Eleanor Hulda Calhoun, the daughter of the late Judge E. E. Calhoun, of California, a son of the founder of the town of Paducah, Kentucky, and a nephew of the great American Statesman John C. Calhoun. She is known as a writer, her memoirs entitled: "Pleasures and Palaces," were published in 1915 by the Century Company, New York. She was a collaborator of my father in his work published 1910 entitled: "The Serbian People, Their Past Glories and Their Destiny."

Thanks are extended to the Editors of: "The North American Review," "The New York Times," "The Herald Tribune" and "The Sun" for their kind permission to use and reprint in this book excerpts from articles which had appeared in their publications.

For a better exposition of the subject the material was divided into four parts: (1) The paper on the "Danube-Aegean Waterway," containing abstracts of reports, general project and estimate of costs, as presented in 1920 to the American Society of Civil Engineers. (2) Correspondence and other matter directly connected with the waterway project. (3) Miscellaneous correspondence, reprints and extracts from articles and books, etc., to serve as background and complement to the outline of my father's life. And (4) maps, profiles, etc., of the Danube-Aegean Waterway project.

New York, 1926.

MARA DE CZERNUCKI-LAZAROVICH-HREBELIANOVICH.

I.

THE DANUBE-AEGEAN WATERWAY PROJECT.

**A PAPER PRESENTED TO THE AMERICAN SOCIETY OF CIVIL ENGINEERS IN
1920 BY PRINCE LAZAROVICH-HREBELIANOVICH.**

DANUBE-AEGEAN WATERWAY PROJECT

Reference to the project for constructing a waterway from the Danube in Serbia—using the Morava River and the Vardar River—to Salonika (then still in Turkish hands) on the Aegean Sea, which the present writer has initiated and laid before the Serbian and Turkish governments in April, 1909, can be found in the "U. S. Consular and Trade Reports," of July 7, 1909. In this issue the American Consul General at Constantinople notes the good reception accorded this proposition, referring also to the survey then in progress for that purpose under the direction of Professor N. I. Stamenkovich, of Belgrade University, Engineering School, appointed chief engineer by the present writer to prepare the engineering part of the project.

As every large engineering enterprise is bound to be intimately connected with the political events and the political and economic development of the nation interested, this project also is intimately connected and interwoven with the political events which preceded and led up to the World War. The story, therefore, of this canal project, becomes one of interest of the moment, not only from the engineering point of view, but in its economic, political and historic aspect relative both to the past and the future.

The story of this waterway will therefore have to treat not only the elements which are of interest to the engineer, but also those of interest to the statesman, who from the teachings of the past and the material at present in hand can together with his brother engineer—the technical construction man—build and plan a better and more happier future for the nation.

A copy of the present paper was sent to Professor Jovan Cvijich, head of the Geographical Institute in Belgrade University with the request to deposit it in the Library of the University as a memento to the late Professor Stamenkovich, who had been a member of the faculty of that University. In that connection it must be mentioned that Professor Cvijich had given most valuable advise and help to his former colleague in the elaboration of the reports and the engineering project.

The following pages deal with the political, economic, financial and engineering aspects of the waterway project. Appended are an abstract from the reports and the general project made by Professor Stamenkovich and his assistants, maps, profiles, etc.

LAZAROVICH-HREBELIANOVICH.

A GENERAL SURVEY.

Baron Kaneko, the Japanese author and statesman said: "In the twentieth century it is the increase and expansion of international commerce that guides the policies of nations."

Looking at the world's map and bearing in mind that water, whether ocean, lake or river, affords the cheapest means of commercial intercourse, the shortest and cheapest routes from the great industrial centers of the world to its greatest markets, are seen to lie through the two artificial passages connecting the oceans,—the Suez Canal and the Panama Canal. One in the eastern Mediterranean, one in the Caribbean Sea, both vast lanes of the world's commerce.

If we now take the centers of European industrial and commercial activity, whose raw-products come from the East, and whose manufactured products go to the East as a principal market, and connect the points of maximum intensity in respect to the Suez road we obtain a line which could be called the line of European economic gravity in respect of Suez, and which line drawn on a map, starts in Great Britain, crosses the North Sea, passes through Germany parallel with the River Elbe, crosses Bohemia, touches the Danube and thence continues along that river, which it crosses to entirely traverse Serbia, running parallel with the Morava and Vardar valleys on to Salonika, and thence across the Aegean Sea to Suez, following in respect to communications, the line of least resistance, *i. e.*, water-roads and land-roads, where art has not to overcome differences in level, hence offering means of cheap transportation.

This line of economic gravity was before the war indicative that the two great nations whose economic and commercial interests would clash in respect to the East, were Germany and Great Britain. Whereby the Serbian plateau by its importance in respect to its situation in the Balkan Peninsula and Suez would have to be considered as the first line defense of Suez, and thus the bulwark for Egypt and India, or as the basis from which the conquest of Egypt and India could be undertaken by Germany.

Germany's expansion towards the East was primarily of a commercial and economic nature; direct territorial aggression was less to be feared. England had no object of any territorial aggression in the direction of the Balkans. But the interests of Great Britain and Germany centered in a sense antagonistic to each other in that region.

The only power whose aggression was to be feared in the Balkans was Austria-Hungary—not a country in the modern sense, but a survival of the medieval state-conception, as a dynasty and its possessions. A war between England and Germany, and Germany and Russia was believed by the Hapsburg autocracy to be the most desirable event for giving Austria the occasion to fulfill what was considered at Vienna to be the

Hapsburg ultramontane destiny, *viz.*: The conquest of the adjoining countries of Serbia, Roumania, Poland, the destruction of Russia, the replacing of the Hohenzollern by the Hapsburg, that is the reërection of the old Holy Roman Empire, realizing in the twentieth century the mediæval scheme for universal rule as expressed in the Hapsburg motto: A. E. I. O. U. (*Austria Est Imperare Orbi Universo*). This design has guided the Austrian policy intensively since the first years of the nineties.

This situation showed clearly to the writer, that for Serbia there is no middle way. Either there is a Serbia, powerful and of commensurate international importance, or Serbia and its people will be wiped off the map.

The writer conceived that it would be the part of wisdom to forestall the road necessities of Mid-European commerce Orientwise, and that, by providing such a great commercial highway, the lack of which was constantly put forward as excuse by would-be northern conquerors, Serbia could prevent a storm sooner or later gathering in the north whose wild torrents would sweep the independence of that country out of existence. It was seen that the desired end could well be achieved by building a waterway across Serbia through the valleys of the Morava and Vardar rivers, connecting thus the Danube, and through that river the vast Austrian and German Danube, Elbe, Main, Rhine, Oder and Vistula river and canal systems, directly with the Mediterranean, and by this means creating the shortest water road crossing Europe from the North Sea and the Baltic to the Mediterranean, thence via Suez to the Indian Ocean.

In 1901 the writer went to England as the fully empowered delegate of the Macedonian committee for the purpose of combating English pro-Austrian and pro-Turkish policies, and undertaking to show that Great Britain's true interest lay not in supporting Austria and Turkey, but in helping the Balkan people to gain their freedom and in aiding towards the creation of a strong Serbia, a Serbia whose *sine qua non* of existence and guarantee of independence is the possession of the longitudinal valley, passing through its heart, and formed by the rivers Morava and Vardar. In this task the writer had the kind help and advice of that old and wise British statesman, the late Sir Henry Drummond Wolff. However, it soon became apparent to the writer that the cause of Serbia and that of the Balkans as a whole was seen in London only through Vienna, and that England was still under delusion as to vital British interests in that regard. Indeed it has needed this war to make England see aright and begin to perceive the real motive forces in Mid-Europe.

Among suggestions put forward by the writer in 1904 to interest the British in Serbia's economic and political development, was the proposition to construct a waterway linking the Danube River with the Aegean Sea. The political and economic bearings of such a waterway as a stab-

ilizing factor in the international relations of Mid-Europe and the Near East were urged. The preliminary study of hydrographic and hydrologic conditions of the Morava and Vardar river basins was begun, preparatory to a proper and complete survey and the preparation of a general engineering project. However, it was found that financial England in regard to enterprises in Continental Europe and certain other parts of the world was strongly under Vienna's influence.

The idea then occurred to the writer that the canal project might be a means of interesting certain powerful financial circles in Germany, which ultimately might lead to their influence being brought to bear as an offset to the Hapsburg war intrigues, it being generally accepted that Austria would not dare single-handed to set out on any war adventure. For that she needed the support of Germany.^{6c}

Important quarters in Germany were approached with the intent to interest them in the construction of the Danube-Aegean waterway. The idea was at first favorably received, and the encouragement from high quarters in Germany suggested that there was perhaps a chance of blocking Austria's intention in regard to Serbia. Later in 1906 the moment seemed propitious for a further step and an attempt to directly enlist those quarters in the support of Serbia's economic development and outlet on the Aegean Sea. With that purpose in view persons in Serbia sympathetic to the project and acting upon suggestions made by the writer took steps towards forming among the younger men a group with an economic program which would warrant asking of either Great Britain or Germany support for the economic and political development of Serbia, with the firm and definite guarantee of Serb freedom from any Austrian aggression. The writer forwarded this tentative economic program to Berlin having first urged it in London. A few days later advice came that the letter would be answered in the Reichstag. And so it was. Prince Bulow, the German Chancellor himself gave the answer in a speech before the Reichstag, closing his address with the statement that "in regard to Serbia Germany is bound and will only support the interests of Austria." That closed this chapter completely and fully. And the writer knew henceforth what the future held in store for Serbia.

The writer's American wife then conceived the idea that it might be possible for her through some of her relatives to interest American capital in that enterprise and by that means English and German capital might still come to be interested and so yet perhaps bring to bear influences to prevent the Austrian aggressive plans against Serbia from being upheld by Germany. In summer, 1907, she went to America, where she was able through the kind help of Mr. Thomas Clark, Sr., who grasped

^{6c} See footnote 13a, page 84.

the import of the project, to interest Mr. Alexander Smith Cochran, of Yonkers, N. Y. Mr. Smith Cochran, seeing the possibilities of the idea underlying it, as well as the great value to world trade of the proposed waterway, shortly afterward, during his stay in England, came forward and participated in the initial financing of that project, for the exclusive purpose of which a corporation was subsequently incorporated in New Jersey, U. S. A., under the name of "American Engineering Company." The incorporators being the writer, his wife, and the late Charles L. Atterbury, a New York lawyer of prominence.

In charge of the preliminary study and survey work and the framing of a general project the writer placed Professor N. I. Stamenkovich of the Belgrade University Engineering School, a man known as an authority on river and canal constructions, who later furnished to the writer (*i. e.*, the American Engineering Company) the required reports, a general engineering project together with estimates of costs for the construction of a Danube-Aegean waterway.

These reports and project were submitted by the writer to the Serbian and Turkish governments in April, 1909, with the request for a concession and a Government permit to carry out the necessary preliminary works, and prepare the ground for the financing of the project towards the final construction of the waterway.

Some time after Mr. Smith Cochran had made, what was to have been his first contribution (of five thousand dollars) towards the initial expenses of the engineering reports, the elaboration of the general projects, etc., he withdrew from further participation. As Mr. Smith Cochran's sudden withdrawal coincided with his return from England to America and correspondence is a poor medium to adjust such matters the writer followed him to the United States.

In America the conditions, as they presented themselves to the writer, appeared not very promising and he was at the point of returning to England, when his lawyer, the late Charles L. Atterbury, found certain important New York financial interests favorably inclined to take the project into serious consideration. But, however, it was not very long before political conditions in Europe in regard to the Balkans became such that hope for any success of the political idea underlying that project dwindled and as time passed even every attempt at dealing with it as an engineering project pure and simple had to be abandoned.

At present the construction of that waterway from the Danube to the Aegean Sea along the lines laid down in the project here described is listed among the public works to be undertaken in the near future by the Jugoslav Government.

ECONOMIC CONSIDERATIONS.

As already set forth, if we consider the centers of European industrial and commercial activity, whose raw products come from the East and whose manufactured products go to the East as a principal market, and connect the points of maximum intensity in respect to the Suez road we obtain a line, which could be called the line of European Economic Gravity in respect to Suez, *i. e.*, in respect to trade with the Levant and the Orient, and which line drawn on a map starts in Great Britain at Glasgow, passes Birmingham and London, crosses the North Sea into Holland, then into Germany, where it passes parallel with the River Elbe, crosses Bohemia, touches the Danube, and thence continues along that river, which it crosses to entirely traverse Serbia, running through the valleys of the Morava and Vardar on to Salonika, and thence across the Aegean Sea to Suez, following in respect to communications, the line of least resistance, *i. e.*, water roads and land roads, where art has not to overcome differences of level, hence offering means of cheap transportation.

This line of least resistance in respect to transportation, practically coincides with the arteries of the vast river and canal systems of Central Europe.

The main artery of water transportation within that line of European Economic Gravity in respect to Suez is formed: In Germany, of the Elbe River and its canal system, connecting the Elbe with the Rhine and the Oder; in Bohemia (Czecho-Slovakia) it is formed of the Elbe, which through its tributary the Vltava (Moldau) and a canal is connected with the Danube, and further of the Elbe which by means of a canal system is connected with the Oder, the Vistula and the March River, which latter a tributary of the Danube gives the Elbe system a second connection with the Danube. In Austria and in Hungary this main artery of water transportation is the Danube. Before entering Austria the Danube River is connected in Germany by a canal with the Main, and through that river with the Rhine. In Hungary a well developed canal system covers the Hungarian plains, using and connecting the various tributaries of the Danube in that State.

In Jugoslavia the tributaries of the Danube, the Drava and Sava with its navigable river system, including the Sava tributaries, the Kulpa, the Unna and Sanna, the Vrbas, and Bosna and the Drina, form a natural river waterway system covering practically the whole of northwestern and central Jugoslavia, the navigability of which starts about forty-five miles as the crow flies from the shores of the Adriatic Sea, though those rivers flow not towards the Adriatic but away from it.

In Jugoslavia is another tributary of the Danube, the Morava, flowing due northward, whose valley together with that of the Vardar River, flowing southward into the Aegean Sea, forms in reality a single continu-

ous longitudinal valley crossing Serbia north-south, connecting the plains of the Danube with the Aegean Sea near Salonika. These two rivers, the Morava and Vardar can easily be connected by a canal and made navigable throughout from the Danube to the Aegean, and thus form the last link in the waterway systems of the Danube and the Elbe, thus connecting with tidewater on the Aegean and completing the Central European net-work of cheap roads of commerce.

The waterway net-work so completed, the primary artery of which will be a direct water-road from the North Sea and the Baltic to the Aegean Sea, of a length of about 1610 miles, will constitute an economic trade drainage system of about 16,218 miles of navigable river and canal waterways, and an economic area of about 440,000 square miles, embracing practically the whole of Central Europe, having Hamburg, Bremen, and Rotterdam in the north, and Galatz and Braila in the southeast, and Salonika in the south as its terminal harbors on tidewater.

The above considerations show that the projected waterway from the Danube to the Aegean Sea will form an extension and indispensable complement of the existing and projected central European inland river and canal waterway systems. Its importance to international trade communications can be gauged by discussing:

(1) The position of that projected waterway in relation to the whole waterway system of Central Europe, *i. e.*, its international importance as a trade route.

(2) Its position in regard to the foreign oversea trade of Jugoslavia, in which country eight-tenths of its length lies.

The discussion of the above two points must for obvious reasons take into account only the through or transit traffic to and from tidewater leaving aside the local and foreign continental traffic along the projected waterway.

(1) The Importance of the Projected Waterway as an International Trade Route.

The projected Danube-Aegean waterway will possess the port of Salonika, on the Aegean Sea, as its tidewater terminus, while its river, or inland, terminus will lie on the Danube, which is the great Central European river trade road, navigable from Ulm, in Bavaria (Germany), to its delta on the Black Sea.

The possession of a tidewater terminal harbor in addition to a river inland terminal harbor, makes it logical to assume that this new waterway will become an important route of the foreign trade of Central Europe with Asia and even the countries on the Atlantic Ocean, as well as being of importance to the development of the intercontinental foreign trade of the different European states crossed by the Danube, Elbe and

Rhine waterway systems, and to the development of the domestic trade of Yugoslavia and Greece.

Through the Danube, its tributaries and the canals connecting it with the other river systems the Danube-Aegean route taps vast producing and consuming centers. Its participation in the import and export over-sea trade and transit and export over-sea trade and transit traffic of this vast territory will depend on the cost of inland water transportation to tidewater and the destination and origin of the merchandise carried over-sea—a matter determined by the cost of sea transportation.

If the mid-European areas of production and consumption be defined in respect to direction which their tidewater traffic must naturally take, apart from the question of the foreign over-sea destination or origin of the goods, as conditioned solely by inland waterway transportation costs, it will be seen that the traffic from a certain central zone can with equal advantage use either the northern route via North Sea ports, or the southern route through Salonika, or the Black Sea Danube ports of Galatz and Braila. Logically, all over-sea traffic of the areas northerly of that zone, using the waterway systems, will go through the more adjacent northern ports, of the North Sea and Baltic, while the foreign over-sea traffic of the regions south and southeasterly of that zone will feed the southern ports of Salonika on the Aegean, terminal tidewater harbor of the Danube-Aegean Canal, or Galatz and Braila, the Black Sea-Danube tidewater harbors.

This zone where the cost of inland water transportation either northward or southward to tidewater will be the same, can be located on the map as stretching on the Danube between Linz and Passau in Austria, and between Aussig and Prague on the Elbe and Moldau in Czechoslovakia. Otherwise stated it can be assumed that all over-sea imports and exports eastward of Linz in Austria, and southward and eastward of Prague in Czechoslovakia will take the Danube route southward either to Salonika via Danube-Aegean Canal, or to Galatz and the Black Sea. While all over-sea export and imports, westward of Passau, and northward of Aussig will take either the Danube-Main-Rhine route or the Elbe route to tidewater.

This natural division in the direction of the inland water traffic of over-sea goods will be modified to some extent by the over-sea origin or destination of the merchandise and the cost of transportation in sea-going ship bottoms. Freight costs on sea will shift the borders of this central zone either further to the west on the Danube or to the north on the Elbe, for goods whose sea-freight due to shortened distances will be cheaper via either Salonika, or Galatz and Braila. Or the borders of this zone will shift eastward on the Danube and eastward and southward on

the Elbe and Moldau for goods whose freight cost on sea bottoms are lower via North Sea ports.

Before the World War and before the break-up of the Austro-Hungarian Monarchy, the government of Austria as well as of Hungary diverted by means of its railroad freight tariff policy much of that available freight by rail to the ports of Trieste and Fiume, one the port of Austria, the other that of Hungary, both situated on the Adriatic Sea. For freight-rate purposes the goods were divided into several rate classes. The rates were computed according to tariff zones by distances, and special tariffs were accorded to merchandise—export or import—directed via one or the other of these harbors. Special tariffs tabulated as C₁, C₂, C₃, and Preferred Exceptional Tariffs I and II, were of that kind. Without these special freight tariff rates, which were either at or below the self-cost of railroad transport, the merchandise could not have been shipped either via Trieste or Fiume as export and import tidewater harbors, and as export could not have competed in foreign markets with foreign goods of the same kind. The goods accorded those special below-cost freight rates were: Ores, metal, steel and iron products, coal, wood, cereals (grain), flour, glassware, etc.

The export and import trade via Trieste and Fiume was principally with Egypt, India, the Far East, Great Britain, North and South America, the Mediterranean and Black Sea countries.

TRIESTE:

Imports—Coal, cotton, coffee, cereals, hides, fruits, tobacco.

Exports—Wool, raw and manufactured; sugar, lumber, machinery, and manufactured goods of all kinds in general.

FIUME:

Imports—Coal, wine, rice, fruits, jute, oil, minerals, and chemicals.

Exports—Grain, flour, sugar, lumber, etc.

In regard to the total export and import trade of the former Austro-Hungarian Monarchy, these two ports of Trieste and Fiume participated in that trade with only 4.5 per cent. for Trieste, and 4.2 per cent. for Fiume, whereas the river ports of the Elbe in Bohemia on the German border (now in Czecho-Slovakia) participated with 13.8 per cent. In other figures, for a period of five years the average export, import and transit trade of Trieste was 5,740,000 tons, that of Fiume 5,400,000 tons, whereas the export, import and transit tonnage of the Elbe ports on the German frontier were for the same period of a yearly average of 16,500,000 tons, *i. e.*, 10,760,000 tons more than Trieste, and 11,100,000 tons more than Fiume.

To rightly understand the meaning of those figures, we have to consider that much of the exports and imports via the Elbe ports came up the Elbe from either Hamburg or Bremen, or the Dutch ports of Amsterdam

and Rotterdam, carried on either the canal or river water of the Elbe and Rhine waterway systems. These figures become even more remarkable when we look at the following table of rail transportation of goods to and from Trieste.

Trieste received for export by rail from the hinterland during a period of five years per annum:

100,000 tons from Hungary; 50,000 tons from Switzerland; 550,000 tons from Slovene lands—Styria, Carinthia (mostly iron and steel products, paper, straw-goods, wood and ore); 560,000 tons from Bohemia and Austria (Vienna) (manufactured goods, textiles, and sugar); 50,000 tons from Germany. Total of 1,310,000 tons.

Trieste received for import by rail into the hinterland during that same period per annum:

130,000 tons into Hungary; 250,000 tons into Slovene lands—Styria, Carinthia 470,000 tons into Bohemia, and Austria (Vienna). Total of 850,000 tons.

Which gives a total of 2,260,000 tons as the rail traffic per annum to and from Trieste.

Concerning Fiume we have on hand only a statement saying that 35 per cent. of the total import and export of Fiume passed to and from Fiume by rail, which gives us a total of 1,900,000 tons.

Thus for both ports of Trieste and Fiume the rail traffic with the hinterland amounted to a total of 4,160,000 tons.

In competition with those two Adriatic ports of former Austria-Hungary for the foreign over-sea trade of the hinterland, were the Rumanian Danube-Black Sea ports of Braila and Galatz. These ports are under the International Danube Shipping Commission, under the supervision of which are also the branches of the Danube delta navigable for sea-going vessels.

A comparison between the tonnage which entered and cleared these Danube-Black Sea ports and the ports of Trieste and Fiume is interesting.

For that comparison were chosen the years of 1906 and 1907, as the last years of ordinary traffic. After those years, the crisis in Turkey, annexation of Bosnia-Herzegovina, the Italian-Turkish War, the Balkan wars, and the World War, influenced in some degree the traffic of all these ports.

BRAILA-GALATZ:

In 1906 Danube River trade entered 31,135 boats of 6,773,011 tons; cleared 31,070 boats of 6,963,477 tons. Ocean trade entered 2,644 ships of 3,134,534 tons; cleared 2,625 ships of 3,092,238 tons. Total of 33,779 boats of 9,897,545 tons entered, and 33,695 boats of 10,055,715 tons cleared.

In 1907 31,338 vessels of 9,280,073 tons entered, and 30,873 vessels of 9,352,881 tons cleared in foreign trade, of which 1,014,469 tons were British ship bottoms.

TRIESTE:

In 1906 entered 10,090 vessels of 3,420,175 tons, and cleared 10,091 vessels of 3,426,407 tons, of which tonnage 91 per cent. were Austrian bottoms, mostly State subventioned, and only 150 vessels of 413,214 tons entered and 151 vessels of 418,224 tons cleared that were British bottoms.

FIUME:

In 1907 8,228 vessels of 2,167,646 tons entered and 8,195 vessels of 2,163,754 tons cleared in foreign trade, of which 166 vessels of 489,162 tons were British, and 93 per cent. Austro-Hungarian bottoms, mostly State subventioned.

In the same year the Danube, Sava, and Drava river traffic in Hungary carried 4,277,259 tons, and the Iron Gates of the Danube were negotiated by 875,589 tons of goods.

Such were the over-sea trade conditions before the war and before the break-up of the Austro-Hungarian Monarchy.

As a result of the war Austro-Hungary broke up into:

(1) The independent State formations of German *Austria*, *Czecho-Slovakia*, and *Hungary*.

(2) The *Polish* provinces of *Galicia*, which joined the newly-erected *Polish State*, and which for any traffic considerations in regard to either Trieste or Fiume or the Danube road, will have to be left out of account, as the Polish economic system will divert their traffic by water or rail towards Danzig.

(3) *Transylvania* and the parts of Hungary which joined Rumania, which will also fall out of account as becoming part of the Rumanian economic system.

(4) The *Jugoslav* countries: The *Slovene* lands, *Croatia*, *Dalmatia*, *Bosnia-Herzegovina*, which joined Serbia and Montenegro in the new State-formation of the *State of the Serbs, Croats, and Slovenes*, otherwise called *Jugoslavia*. This territory of Jugoslavia belongs hydrographically almost entirely to the Danube River system, and the principal towns like Lubljana in the Slovene lands, Zagreb in Croatia, Belgrade in Serbia, etc., are all situated on navigable rivers.

The independent new States served by the Danube waterway system and whose over-sea trade traffic can be counted upon to feed a new direct waterway forming a continuation of the Danube River to tide-water are therefore: *Czecho-Slovakia*, possessing the Danube River port of Pressburg; *Austria*, with the the Danube ports of Vienna, Linz, Kor-

neuburg, etc.; *Hungary*, where the Danube River and the Theiss are connected by several good canals; and finally *Jugoslavia*.

It is self-evident that none of these States will find it advantageous to subvention their railroads so that they may carry goods to harbors outside of their custom boundaries, to be carried thence oversea in bottoms not flying the national flags of those countries. Hence, instead of these trade routes hitherto artificially supported, other natural roads which are cheap, convenient and remunerative without artificial aid, will come into their own. Thus it may be assumed that, apart from any foreign export and import traffic of *Jugoslavia*, the projected Danube-Aegean waterway will be able to count on the greater portion of the over-seas export and import traffic of *Hungary*, of *Austria*, and on that part of the overseas trade traffic of *Czecho-Slovakia* which up to now has been directed via *Trieste* or *Fiume*, and which will find the cost of transportation lower by the Danube-Aegean waterway than via *Hamburg* or the Dutch ports.

In the same measure as the *Elbe*, or the *Rhine*—in their lower courses—or as the *Danube* in respect to the *Black Sea*, the new waterway will connect with the *Ocean (Mediterranean Sea)* the three land-locked States of *Austria*, *Czecho-Slovakia*, and *Hungary*. Hence the new waterway must be constructed with a view to making it an international water route allowing the *Danube* ports of *Buda-Pest*, *Pressburg*, and *Vienna* to be reached by vessels able to carry goods directly to harbors in the *Eastern Mediterranean*, without the necessity of transferring the merchandise at the tidewater port (*Salonika*) from river craft to sea-going vessels or vice-versa. In other words, sea-going barges (lighters) of 600 to 1800 tons capacity must be able to use this waterway—an essential for which the project provides.

In view of the considerations above discussed it may be assumed that about 80 per cent. or 1,860,000 tons of the entire rail carried traffic of *Trieste*, and about 90 per cent. or 1,710,000 tons of the rail carried traffic of *Fiume* will take the route via the *Danube-Aegean waterway* and *Salonika*, together from these two sources alone a tonnage of 3,570,000 tons yearly traffic upon which the new waterway can reasonably count.

The traffic passing to and from the different States on the *Danube* via *Galatz* and *Braila* and the *Black Sea* amounts to about 1,000,000 tons per annum. This tonnage will probably also be diverted from the *Danube-Black Sea* route to the new *Danube-Aegean* route because of the well-known navigation difficulties which have hitherto prevented the *Danube* from becoming a commercial waterway of the first rank. The troublesome passage of the *Iron Gates* in the lower *Danube* and the channels cut through the mud bars of the branches of its delta subject all shipping at those points to delays, extra tug and trans-shipment expenses and heavy tolls.

The rocky obstacles, consisting of several series of rock-banks, lying crosswise of the river-bed, each rock mass over a thousand yards in width, causing violent water rushes, whirlpool and rapids, extending for over a hundred miles of the river's course and ending in the famous Iron Gates, begin to occur fifty miles below the point of the Danube where that river receives the waters of the Serb river Morava. The efforts to overcome those obstacles and make navigable that stretch of the Danube, were exceedingly arduous and costly. Channels, eighty feet wide cut through solid rock, training walls and other formidable works failed to a serious extent to realize the desired result, and the original difficulties were never entirely removed.

The object of the works was to attain throughout the entire one hundred mile stretch at low water a minimum depth of 2 meters (6.56 feet) except at Sip, the canal there cutting the Iron Gates having a depth of 3 meters (9.84 feet). In spite of the works done only boats of not more than 60 centimeters (1.97 feet) draught can go down stream at low water as far as Orsova, and only below that point can boats of 1 meter (3.28 feet) draught be navigated. In the canal of Sip, navigation, owing to the great velocity of the water, is possible only by means of tugs capable of developing 1,000 horse-power. At low water, boats of 600 tons, passing through the Sip canal, are forced to have their load reduced to 450 tons so as not to exceed a draught of 1.60 meters (5.2 feet) and with that reduced load and that draught the passage through the canal—2,200 meters long (1.3 miles)—requires an hour. For a boat of 800 tons with a reduced draught of 1.8 meters (5.9 feet) two tugs of 1,600 horse-power are necessary, and the passage requires 67 minutes.

The tolls received at the Iron Gates, stated in U. S. currency, are:

- (1) Every boat pays per 1,000 kilograms (2,200 pounds) carrying power, 4.05c.
- (2) The cargo pays per 100 kilograms (220 pounds), 3.65c.

In addition to these tolls and delays at the Iron Gates, vessels clearing the sand and mud bars of Sulina and other branches of the Danube delta are subject to further tolls, due to the constant heavy costs of keeping the channels open. The tolls at Sulina vary, the average toll for vessels laden in Danubian ports are:

Boats from 210 to 600 tons pay 0.55 Lei or 10.6c per registered ton; boats from 601 to 1,000 tons pay 1.10 Lei or 21.2c per registered ton; boats from 1,001 to 1,500 tons pay 1.40 Lei or 25.1c per registered ton; above 1,502 tons pay 1.70 Lei or 31.8c per registered ton.

This accumulation of navigation difficulties of the lower Danube justify amply the assumption that the 1,000,000 tons export and import traffic carried by the Danube from the various Danubian States to Black

Sea tidewater, will, with the opening of the Morava-Vardar Canal (Danube-Aegean waterway), in preference use this new water route to Aegean Sea tidewater.

The Danube-Aegean waterway will shorten the water route from the North Sea ports of Hamburg, Bremen, etc., to Suez by 1,800 miles, and to Constantinople by half. As boats of 300, 600 and more (1,800) tons can be constructed so as to be used on rivers, canals and the sea, thus making the trans-shipment of merchandise unnecessary from canal or river vessel to sea-going bottoms for either coastal or short distance sea transportation. Boats navigating the Danube-Aegean Canal, and its continuation, the Danube, Sava, Drava rivers, and Danube and Elbe River waterway systems could bring their cargoes directly to Constantinople, Smyrna, and even Suez.^{6b}

To sum up: It can confidently be assumed that this new waterway will be one of the highways of trade of international importance, which in connection with the existing and projected waterway systems of South Germany, Czecho-Slovakia, Austria, Hungary, and Yugoslavia, cannot fail to influence the routes of trade intercourse between the North Sea, the Baltic, the Levant, and the Indian Ocean.

(2) The Importance of the New Waterway to Yugoslav Foreign Over-Sea Trade.

The importance of the Danube-Aegean waterway in regard to the development of the foreign over-seas trade of Yugoslavia derives primarily from the fact that its river terminus on the Danube lies within the Serb, Croat, and Slovene territory, and about eight-tenths of its length is within the boundaries of that State. The remaining stretch of the canal is through Greek territory to its tidewater terminus, the port of Salonika, Greece.

Looking at the map, it will be seen that three-fourths of the territory of the State of the Serbs, Croats, and Slovenes (Yugoslavia) belongs hydrographically to the Danube and Vardar River systems, *i. e.*, the Black Sea and Aegean Sea drainage basins, and not to the Adriatic Sea drainage basin.

The watershed between the Black Sea system and the Adriatic Sea system, *i. e.*, between the Danube River system and that of the rivers emptying into the Adriatic runs from about thirty-five miles north of Trieste and east of the Isonzo, in a northwest-southeast direction to about twelve miles north of Fiume, thence along the Adriatic Sea shores sometimes less than two miles from the shore, to swerve in an arc of about 30 miles radius inland encircling the basin of the Zermagna, Kerka, Citoka, and Cetina rivers, and thence outlining the drainage basin of

^{6b} River and canal boats of 500 and more tons (1500) engaged in the coal and grain trade are towed constantly along the east coast of England in the North Sea, and along the Atlantic and Pacific coasts of America.

the Neretva and Drim—belonging to the Adriatic—the watershed runs parallel to the Adriatic shores at a distance inland of some 60 miles. Therefore, with the exception of the small drainage basins of the Zermagna, Kerka, Cikota, and Cetina in Dalmatia, and the drainage basins of the Neretva and Drim, which include western Herzegovina and Montenegro and the Adriatic shore, the entire expanse of Yugoslav lands or about 78,000 square miles of the total 100,000 square miles of Yugoslavia belongs to the Danube River or Black Sea drainage system, and in southern Serbia to the Vardar River or Aegean Sea drainage system.

To connect the Danube system with the Vardar system by the projected Danube-Aegean Canal, giving it a tidewater port on the Aegean Sea, will complete an already existing natural river waterway system, the whole forming a net of trade roads of prime importance to the economic development of the country.

The rivers already navigable belonging to that system, besides the navigable Danube and Theiss, and the Morava and Vardar, whose junction will form the new water road to tidewater are:

(1) The *Drava*, which is navigable for 350 miles, of which 100 miles are navigable at low water for boats of 5-foot draught, and 250 miles being limited to craft of from 1-foot to 3-foot draught. Through this river the new waterway will give direct connection by water with the sea, to the northern section of the Slovene lands, the Styrian parts of Austria, and the northern parts of Croatia-Slavonia. The chief products of those regions are: Metallic ores, metals, grain, cattle, lumber, paper, etc.

(2) The *Sava* River, which is navigable during 360 miles, at low water for steamers and boats of 5-foot draught and during another 50 miles for craft of from 1-foot and 3-foot draught. Of the tributaries of this river in Croatia, the *Kulpa* can at slight cost be made navigable up to Karlovac for boats of 5-foot draught; in Bosnia, the *Unna* is navigable for 50 miles, the *Vrbas* for 40 miles, the *Bosna* for 40 miles, and the *Drina* during 106 miles for steamers and boats of 3-foot draught. All the tributaries of Sava can at relatively small outlay be transformed into navigable waterways penetrating deep into Bosnia, waterways able to float boats of from 200 to 300 tons and for certain distances for boats of 600 tons capacity.

This natural river network of the Sava and its tributaries can through the projected new waterway connect directly with tidewater the western and southern parts of Croatia-Slavonia, the northern and central parts of Bosnia, and the western parts of Serbia.

A characteristic of that territory covered by the Sava-Kulpa-Unna-Vrbas-Bosna-Drina navigable river system is, that its western part, nearest to the Adriatic shores and the harbor of Fiume is exceedingly moun-

tainous and rocky, and that the nearer it is to the Adriatic the least productive it is, while the further away it is from the Adriatic shores the richer and more productive is the country which merges more and more into rich alluvial plainlands. The great production centers are between the Sava, Drava, Danube, Theiss, and the valley of the Morava belonging to the Danubian plains. This lay of the land and its hydrographic conditions make the natural trend of the trade roads of that territory southward through the projected waterway to the Aegean Sea. The chief products of the Sava River basin (34,000 square miles) are: Ores, metals (pig iron), coal, lumber, building materials, agricultural products, such as grain and other cereals, cattle, hides, wine, etc.

Under the pre-war régime a portion of the foreign trade of those countries, formerly part of Austria or of Hungary, was artificially directed towards Fiume and Trieste. The Austro-Hungarian Monarchy has now ceased to exist, and with it the subvention of railroad traffic directed to or from those ports; further the Austro-Hungarian mercantile marine, together with the State subvention that supported it, also no longer exists, and the freight rates below self-cost of transportation on rail or in sea-going bottoms has therefore come to an end.

Jugoslavia will have no interest in taxing its people so that the ports of Fiume or of Trieste, or the Italian or any other foreign merchant navy should monopolize the import and export traffic of Jugoslavia. Nor is it likely that Jugoslavia will subvention the Italian merchant marine, to be able to compete with Yugoslav merchant shipping, whose harbors will be Shibenik, Split, and Dubrovnik (Ragusa). The natural trend of Yugoslav commerce is not towards Italy, as Italy will never be and cannot be the absorptive center of the whole Yugoslav and Central European production. Neither can Italy become the sole distributor, except if the Balkans and Central Europe, by force of conquest be made economic tributary territories or colonies of Italy. Such is clearly the Italian ambition, as shown by Italy's stand on the Adriatic question. This Italian ambition, which would stifle the free development of Jugoslavia will never be attained except by military conquest.

Trieste and Fiume, situated at the top of the Adriatic Sea, are some six hundred miles away from the great mercantile shipping routes from Europe to the Orient. Their life as commercial ports was always more or less on an artificial basis, and upon reverting to conditions of natural competition without aid, their future is one of natural death.^{6a}

^{6a} Fiume, situated on the shores of the Adriatic at the base of high mountains, whose seaward slopes rise nearly abruptly from the waters of the Adriatic Sea to heights of over 3,000 feet, has by nature an exceedingly small waterfront and insufficient space for railroad terminal accommodations. Its harbor facilities cannot further be developed on the landside; every additional foot of port or rail facilities has to be taken from the sea by extremely costly constructions. That fact became evident at a time when the constructions of the Fiume harbor basins and Port

While Salonika, lying within easy range of the great sea trade routes to South Russia and the Orient is bound to become a regular port of call, a port of transit and re-shipment.

The parts of Yugoslavia which do not belong to the Sava-Drava-Danube-Morava-Vardar river and waterway system, *viz.*: Parts of Dalmatia, Western Herzegovina and Montenegro, and the narrow strip of Adriatic seashore, will find their natural tidewater port in Shibenik, Split, and Dubrovnik (Ragusa), which ports can be fed by rail only. The same is true for that part of Yugoslavia which lies between those points naturally dependent on rail transportation to and from Adriatic tidewater and on rail transportation to and from the terminal water ports of the Sava, Danube, Drava, Danube-Aegean river and canal systems. It will be good and sound economic policy for Yugoslavia to provide special railroad freight rates, even below self-cost-of-transportation for merchandise to and from the Yugoslav Adriatic tidewater ports, say Shibenik, Split, and Dubrovnik, and to and from the river ports of the Sava, Drava, Danube, Morava-Vardar waterway system. Even subvention by taxation would in that case be sound economic policy for the State.

To sum up: It is found that the major extent of the territory of the Serb, Croat, and Slovene State, covering the producing centers of the Slovene lands, Croatia-Slavonia, Bosnia, Banat and Batchka, and Serbia can, due to their navigable water roads, totalling 1,800 miles, be brought into direct communication with the Oceans, through Salonika, the tidewater port of the Danube-Aegean waterway, by means of which their various river harbors, though inland, will possess the trade advantages of seaports.

ENGINEERING ASPECT.

For the purpose of constructing a navigable waterway from the Danube to the nearest point on the Mediterranean, a distance of about 380 miles, it is proposed to make navigable and connected by a canal the Morava River pouring into the Danube and the Vardar River emptying into the Aegean Sea, thus construct a continuous water road between the port of Salonika at the head of the Aegean Sea in Greece and Kulitch

Baros had not yet been completed. The studies then made led the Hungarian Government to the conclusion that any further development of Fiume's seafront beyond the development under way of construction be abandoned and port facilities for Hungarian oversea trade be sought elsewhere along the coast. The magnificent natural harbors of Shibenik and Split, some hundred miles south of Fiume on the Dalmatian coast were found to satisfy the requirements. Plans were then made to connect the Austrian and Hungarian railway systems with those two Dalmatian harbors, Shibenik and Split, which were to be the principal terminal sea ports of those communication systems. For that purpose two treaties were negotiated and signed between Austria and Hungary, but the bitter opposition of the Sud Bahn, a railroad system connecting Vienna with Trieste and Fiume, owned by French capital, did not permit the execution of those treaties. The Sud Bahn system as an Alpine road has very heavy grades, whereas the projected lines passing mostly through plains would have been of very easy grade.

on the Danube in Serbia, of a sufficient width and depth to carry vessels possessing a maximum freight capacity of 1800 tons.

Practically the whole canal systems of Hungary, Austria, Czechoslovakia and Germany have been constructed with dimensions suitable to be navigated by boats of the maximum dimensions of: Length on waterline, 65 meters (213.2 feet); width, 8 meters (26.2 feet); and a draught of 1.75 meters (5.7 feet). Also all the great tributaries of the river-systems, like the Theiss, Maros, Sava, Drava are navigable by boats of such dimensions, which allows a carrying capacity of 600 tons mean load, and 800 tons when loaded to a draught of 2 meters (6.56 feet).

The maximum dimensions for boats to navigate the Danube-Aegean Waterway have been fixed at: Length on water line, 87 meters (285.3 feet); width, 10.2 meters (33.4 feet), and a draught of 2.5 meters (8.2 feet) with 1,800 tons load capacity, the reasons being: (1) Boats of these dimensions can be operated to advantage along the coasts in the Aegean Sea and the Eastern Mediterranean. (2) The Danube, up to and beyond Vienna, possesses already a traffic carried on in boats of such a size and tonnage. (3) Pressburg, which is the Danubian River port of Czechoslovakia, is bound to become the terminal point of a great bulk of Czechoslovak foreign trade, especially when the Pardubitz-Prerau-March river canal is completed, and this type of boat would enable Czechoslovakia, one of the great industrial producing countries of Europe, to be in direct water communication with ports in the Eastern Mediterranean without requiring relading of the merchandise at the terminal port of the canal at tidewater.

To get a general idea of the proposed waterway it is best to follow on a map the railroad line running from Smederevo, Serbia (on the Danube) to Salonika on the Aegean Sea in Greece.

The railroad line follows closely the course of the Morava River, in the valley of that river, then passes across the relatively slight difference of level forming the watershed between the Morava and the Vardar and thence descends into the valley of the Vardar, where it follows the course of that river to Salonika. Along the whole line from Smederevo to Salonika the gradients are very low and the railroad negotiates the watershed without the necessity of artificial means of lowering the grade, tunnels, viaducts, etc.

The headwaters of both rivers rise near each other on that watershed, and the difference of level between the heads of the drainage troughs is so insignificant that it cannot be perceived with the eye, and during high water the headwaters of the two river systems often commingle.

The Morava and Vardar valleys constitute in reality a continuous longitudinal valley, the watershed being only a difference of level in the

“talweg.” The watershed itself forms a valley several miles wide framed by mountains with gently sloping sides. The altitude above sea level of the watershed measured at the railroad station (the summit) of Preshevo is 1508 feet, the mean altitude above sea level of the western and eastern mountain ranges is: For the Cerna Gora range, 4,600 feet; and for the Rujan Mountains, 3,100 feet. (The altitude figures given represent the mean height of the mountain chain.) Thus the mountains framing the longitudinal valley attain at the watershed a difference of altitude above the watershed of 3,100 feet in the Cerna Gora range on the western side of the valley, and of 1,600 feet in the Rujan Mountains on the eastern side of the valley.

These circumstances, easily understood if the geology and tectonic structure of the Balkan Peninsula is considered, are unique in Europe and render the longitudinal valley Morava-Vardar the easiest and most direct route from the Danube River to the Aegean Sea and Mediterranean.

The length of the Morava from the Danube to the watershed is 512 kilometers, or 318 miles, with an average fall of 0.76 feet per 1,000 feet.

The length of the Vardar from its mouth on the Aegean Sea to the watershed is 370 kilometers, or 230 miles, with an average fall of 1.13 feet per 1,000 feet.

The surface drained (drainage basin) by the Morava from its watershed to the Danube is 38,270 square kilometers or 14,772 square miles.

The surface drained by the Vardar from its mouth on the Aegean Sea to the watershed is 27,925 square kilometers, or 10,679 square miles.

There is a copious and sufficient supply of water available throughout the year in all seasons for the entire length of both rivers.

The water quantity at low water for the Morava measured near Tchupria (Serbia) has been found to be 44 cubic meters, or 1,443.6 cubic feet per second.

The water quantity at low water for the Vardar measured near Demir-Kapu (South Serbia) has been found to be 34 cubic meters or 1,190.5 cubic feet per second.

The Morava and parts of the Vardar are often frozen in winter, from the middle of December to the first half of February. However, during 300 days in the year, the rivers are ice-free, and permit navigation.

The work necessary for the construction of the waterway will consist in:

- (1) Regulation and canalization of parts of the Morava and Vardar,
- (2) The construction of a navigable canal for a certain length of each river, and to connect them on the watershed, where,
- (3) A summit-level in the shape of a reservoir or artificial lake to feed the canal will be required.

The character of the ground, the type and dimensions of the boat chosen, and the provision for two such vessels to pass each other at any point of the waterway, called for observance of the following points in the general engineering project:

(1) The length of each level-reach, from lock to lock, not to be less than 4 kilometers, or 2.5 miles.

(2) The minimum water-depth to be 3 meters (9.84 feet), the minimum bottom width of the canal to be 22.5 meters (73.8 feet). The sectional area below the waterline to be not less than 86 square meters, or 925.7 square feet.

(3) The angle of slope of the canal side must vary with the nature of the soil, but the following standard was adopted:

(a) Below waterline, from bottom, the natural slope of 1:2.

(b) Up to 1 meter below the waterline and 1 meter above the waterline, the slope to be 1:3.

(c) The remaining upper part, embankment, can be given a slope of 1:1.5.

(4) At a height of 1.5 meters above the waterline, on both sides of the canal, to be constructed tow-paths of a width of 3.5 meters for the haulage of boats.

(5) The tow-paths for haulage to be at least 0.5 meter above the high-water mark of the nearest river.

(6) Near ports and in appropriated places where boats may be required to turn the width of the canal bottom shall be not less than 100 meters.

(7) At curves the radius of the canal axis to be not less than 400 meters. Where the radius is greater than 2,000 meters the canal bed can retain its normal width, but where the radius is less than 2,000 meters the canal bottom shall be widened, in meters, at the curve summits on the concave side in proportion to the radius, according to the equation:

$$S_1 = S + 2(r - \sqrt{r^2 - 1900}).$$

S_1 = width of bottom at curve's summit.

S = normal width of bottom.

r = radius of curve of canal axis.

(8) The widening of the curve to be strengthened by reënforcing the slope of the embankment on the concave side.

(9) In tunnels the air-width of the canal, between the tow-paths shall not be less than 10.6 meters, and the minimum water-depth 4.0 meters.

(10) Under railway and road bridges the air-width of the canal to be a minimum of 40 meters, and the water-line of the canal to have at least 4 meters clearance below the lower edge of the bridge construction.

(11) At all crossings (river, road, railroad, etc.) the cross-section

of the aqueduct to be of rectangular shape and of 24 meters width and 4 meters depth.

(12) Locks to have a minimum length of 88 meters, a minimum width of 10.6 meters and a depth of 4 meters.

(13) The locks to be of the ordinary hydrostatic type without mechanical hoists

(14) 100 meters in front of the head-bay and 100 meters back of the after-bay the water depth to be a minimum of 4 meters.

(15) The lay-out of the locks to be such as to permit their duplication should future traffic so require.

(16) The difference of level at the adjoining reaches at locks not to be greater than 9.5 meters (30.5 feet). Where a greater level difference is needed the locks to be multiple of the "flight" type.

(17) All locks of a level difference greater than 7 meter (23.1 feet) to have a side-pond.

(18) The summit-level and reservoir (artificial lake) to have a depth greater than 4 meters (13.2 feet).

(19) The inflow of greater tributaries into the canal to be avoided.

(20) All bridge and dam foundations to be such in construction that the canal bottom could be lowered by 1 meter (3.3 feet).

(21) Wherever possible there shall be constructed special side-canal and ponds to gather and bring water from nearby water courses, in such quantity as can be obtained, in order to make available at the locks the greatest possible water power for hydro-electric purposes, furnishing electric power for the propulsion of the canal boats.

(22) In order that the water flow may fully be utilized in the generation of hydro-electric power, the fall in such side canals and ponds must not cause a greater velocity of flow than 0.20 meter per second.

The preliminary survey and lay-out, guided by the above points, show that the length of both rivers will be shortened considerably, thus:

(a) The Morava part of the waterway will be 353 kilometers or 219 miles long and will require a maximum of 64 locks.

(b) The summit-level at Preshevo will consist of a reservoir 12 kilometers or 7.5 miles long between locks, with a capacity of giving 5.42 cubic meters or 191.4 cubic feet of water per second.

(c) The Vardar part of the waterway will be 248 kilometers or 154 miles long with 40 locks.

Therefore, the entire length of the waterway Danube-Aegean Sea will be 612 kilometers or 380 miles, with 104 locks.

However, as the general hydrographic conditions of the drainage basins of both river systems point to the very certain probability of an over-abundance of water supply, it will be possible to increase the level

differences between the individual reaches, making them longer, and thus to reduce the number of locks.

Besides locks (104) the waterway will require the construction of 30 movable weirs, 9 aqueducts (navigable) across larger water courses, also 9 navigable aqueducts crossing over railroad lines, and at one point a tunnel crossing beneath the railroad track.

Comparing the projected Danube-Aegean waterway with the waterways projected and under construction in Austria and Czecho-Slovakia, it is found:

According to the reports issued regarding the waterways projected and under construction in Austria and Czecho-Slovakia (Austrian and Bohemian laws, authorizing construction passed in 1901):

The Danube-Moldau (Vltava) Canal or otherwise called Vienna-Budweis Canal, of a length of 205 kilometers, has to overcome 535 meters of fall divided over 129 locks, *i. e.*, per each kilometer of length a fall of approximately of 2.6 meters has to be overcome.

The Bohemian-Moravian Canal connecting the Elbe River with the Oder River—part of the projected canal system to connect the Elbe and Oder with the Danube—has a length of 196 kilometers, and requires 100 locks to overcome a fall of 411 meters, or a fall of 2.1 meters per kilometer of its length.

The Linz Budweis Canal (Danube-Moldau) is 95 kilometers long and overcomes a fall of 748 meters by means of 170 locks, *i. e.*, a fall of 7.87 meters per kilometer of its length.

Compare the above instances with the fall to be met by the Danube-Aegean project, to wit:

The Danube-Aegean waterway for 612 kilometers of length has to overcome 812 meters of fall, or a fall of only 1.32 meters per kilometers of length. Which shows the Danube-Aegean is technically far easier of construction than the above referred to canals, including several already built and others under construction.

Cost of Construction:

The general estimate of costs (see Appendix A) shows:

(1) The canalization of the Great Morava, 155.3 kilometers in length, including dams, weirs, and locks in the gorge of Stalatch, together with three ports to be of a total cost of \$7,321,600, or \$47,144 per kilometer.

Similar canalizations executed in Germany have cost on the average about \$40,000 per kilometer. Hence it can be assumed that the above cost estimates for the work of canalization of the Great Morava are amply sufficient.

(2) The construction of a navigable canal from Stalatch across the watershed of Preshevo, thence descending into the valley of the Vardar,

and following that valley up to the sea at Salonika, of a length of 456.7 kilometers, including locks and ports will, according to the estimate of costs, be of a total cost of \$50,886,800, or \$111,425 per kilometer.

This estimate also corresponds to the cost of similar canals constructed in Germany and Hungary.

(3) The sum of \$8,191,600 foreseen in the estimate of costs under III for preliminary works, making of detail-project, management and supervision of work during construction, interest on capital, fixed charges, etc., is composed of:

(a) \$878,400 to cover such expenses for the canalization of the Great Morava, and,

(b) \$7,313,200 to cover such expenses on the canal.

These sums added to the above-estimated costs give for the canalization of the Great Morava a sum of \$8,200,000, or \$52,800 per kilometer; and for the construction of the canal a sum of \$58,200,000, or \$127,850 per kilometer.

Thus the estimated total cost of the entire waterway Danube-Aegean is \$66,400,000, and an average cost of \$108,500 per kilometer.

FINANCIAL CONSIDERATIONS.

Starting from the supposition that the entire length of the Danube-Aegean waterway will be 612 kilometers, or 380 miles, requiring 104 locks, the total cost of construction according to the table of estimates furnished by Professor Stamenkovich in the general project and estimates of costs, is \$66,380,000. This figure includes: (1) the cost of actual construction, *i. e.*, regulation and canalization of the rivers, construction of navigable canal, etc.; and (2) the sum of \$8,191,300 for preliminary work—administration, upkeep during construction, unforeseen expenses and interests on capital during construction.

But for convenience sake, in the following computations that cost is assumed at the round sum of \$70,000,000. The yearly interest and amortization services at 5.2 per cent. on \$70,000,000 call for an annual amount of \$3,640,000. In addition to which a sum must be provided to cover the annual costs of maintenance and other administration charges.

The sum required to cover these annual expenses has been computed on the basis of the cost of maintenance, administration and other charges incurred by the German, Austrian and Hungarian canals, where experience during many years of work has standardized those expenses. Although the dimensions of these canals are somewhat smaller than those of the new waterway, that difference is not so great as to warrant the assumption that the cost of maintenance and other charges of the Danube-Aegean Canal will appreciably exceed those of the aforesaid canals.

The yearly expense of maintenance, etc., of the German, Austrian, and Hungarian canals has shown itself to average \$1,400 per kilometer (or \$2,338 per mile) of canal.

Taking this figure of \$1,400 per kilometer as basis for computing the costs of maintenance, etc., of the new waterway, we obtain the sum of \$856,800, as the average annual amount required.

Thus the yearly sum to cover interest, amortization, plus cost of maintenance, etc., will have to be:

$$\$3,640,000 + \$856,800 = \$4,496,800.$$

To provide this annual requirement of \$4,497,000 a certain charge or toll will have to be paid by each ton of merchandise transported on the waterway.

For the purpose of determining the toll charges per ton and kilometer (or ton and mile) the merchandise is divided (by a method similar to that used in establishing freight tariffs for railroads) into several classes, the first class of which pays the highest and the last class the lowest rate. On German, Austrian and Hungarian canals the goods are divided into three or five classes, the highest rate being 0.47c, the lowest 0.059c per ton and kilometer of transport.

The average toll rate per ton and kilometer regardless of class of merchandise is computed by taking a load of 100 tons, composed of goods of all five classes in the ratio according to which, as shown by experience, those various classes of merchandise would participate in the composition of such a load. The toll figure thus obtained, divided through 100, gives the mean toll for ton and kilometer.

On German, Austrian and Hungarian canals this mean toll has been computed at 0.167c per ton and kilometer or 0.26c per ton and mile. And experience has shown that the toll charges as figured above have given earnings sufficient to cover interest, cost of maintenance and all other charges on those canals. Hence this mean toll figure of 0.167c per ton and kilometer may safely be used in computing the yearly earnings necessary to meet all annual charges on the Danube-Aegean waterway.

On the basis of 0.167c per ton-kilometer (or 0.26c per ton-mile) the sum of \$4,496,000 annually necessary to pay the interest and amortization on the construction capital, and the maintenance, etc., of the waterway, will require a yearly traffic on the waterway of 2,810,000,000 ton-kilometers (1,744,770,000 ton-miles) or 4,591,500 tons through freight.

On an earlier page it was shown that the Danube-Aegean waterway will be able to count on that part of the foreign over-sea export and import freight traffic of Austria, Czecho-Slovakia, Hungary, and Jugoslavia, which up to the war, aided by special railroad freight rates below transportation costs, has been directed via Trieste and Fiume, and which trade will, with after-war conditions, find it cheaper to use this new waterway.

(a) It was assumed that about 80 per cent. of the Trieste rail-carried traffic, or 1,860,000 tons, and 90 per cent. of the Fiume rail-carried traffic, or 1,710,000 tons, or a total of 3,570,000 tons, will be diverted to the new route via Danube-Aegean to tidewater at Salonika.

(b) It was also stated that to this tonnage must be added 1,000,000 tons, representing the tonnage which probably will be diverted to the new waterway from the Danube-Black Sea traffic to and from the various States bordering the Danube River.

(c) In pre-war time the through freight traffic on the railroad line Belgrade-Smederevo-Salonika, taking the year 1906 as normal, was:

Export and transit freight via Belgrade to Salonika—34,334 tons. Import and transit freight from Salonika via Belgrade—10,100 tons. Or, the total rail-carried traffic, export, import, and transit freight—44,434 tons. The goods transported were grain, flour, bran, sugar, coffee, tobacco, textiles, chemicals, hides, skins, cattle, sheep, wool, eggs, opium, chrome, manganese, iron (ore and metal), machinery, etc. It can be assumed that 75 per cent. of those goods, or 33,000 tons, will for reason of their bulk and weight use the waterway instead of rail transportation. Expressed in ton-kilometers there 33,000 tons represent 20,395,000 ton-kilometers.

To sum up, the estimated through (or transit) traffic to and from tidewater passing the entire length of the Danube-Aegean waterway, we have:

(a) Traffic diverted from Trieste and Fiume.....	3,570,000 tons
(b) Traffic diverted from Danube-Black Sea ports.....	1,000,000 tons
(c) Traffic diverted from railroad Belgrade-Salonika....	33,000 tons

Total tons.....	4,603,000
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or 2,817,000,000 ton-kilometers (1,749,264,000 ton-miles), which, with a toll charge of \$.167c per ton and kilometer, will give a yearly earning of the waterway from through traffic alone, the sum of \$4,511,576.

Comparing these figures with the annual requirement computed necessary to cover interest and amortization on construction capital, cost of maintenance and all other charges, *i. e.*, \$4,496,000, calling for a yearly traffic of 2,810,00,000 ton-kilometers, the result is

2,817,000,000 t/km	\$4,511,576
2,810,000,000	4,497,000

7,000,000 t/km or \$15,576 annual

surplus based on through traffic alone upon which the new waterway can reasonably count.

These estimates based upon actual pre-war traffic movements, leave out of account whatever local Jugo-Slav and foreign inter-continental traffic the new waterway may serve. However, experience has shown

that in every case where a water road has been put at the disposal of commerce, the traffic in general on both railroad and waterway have increased, and that traffic has been created where none before existed.

Sympher in his book: "On the Economic Importance of the Rhine-Elbe Canal" (1901) says the following in regard to the increase of traffic in general on both railroad and waterway:

"The increase in freight traffic is considerably greater on waterways than on railroads.

"In the period from 1875 to 1898 the kilometric freight traffic on the German waterways increased from 290,000 tons to 1,070,000 tons (*i. e.*, by 270 per cent.). During the same period the increase on the German railroads was from 410,000 to 676,000 tons (*i. e.*, 66 per cent.). The length of the waterways (about 10,000 kilometers) during the same time remained stationary, while the railroad mileage was nearly doubled (*i. e.*, increased from 26,500 to 48,200 kilometers). The participation of the waterways in the total freight traffic of Germany was 21 per cent. in 1875 and 25 per cent. in 1898.

"In France, which possesses networks of waterways extended and connected in the interest of the general traffic, but where the dimensions of the canals are considerably smaller than those of the German canals, the kilometric freight traffic on the waterways increased during that same period of twenty years (1875-1895) from 163,000 to 307,000 tons, that is by 88 per cent., while during the same period the freight traffic on the railroads decreased from 372,000 tons to 356,000 tons. In France, during that same period the participation of the waterways in the total movement of goods increased from 21 per cent. to 23 per cent., although during that time the increase in the total length of the waterways was unimportant (from 12,000 to 12,300 kilometers), while the railroads almost doubled their mileage (from 19,800 to 36,000 kilometers)."

The Austrian engineer, Dr. Henry Schlesinger in his study on the economic importance of the Donau-Moldau-Elbe Canal (1902) says (page 37):

"The local effect of waterways of adequate traffic capacity, can be seen in the following examples:

"The water traffic in Berlin was in 1879 about 3,675,000 tons. In 1880 it had risen to 4,280,000 tons (by 16.5 per cent. in one year), and in 1898 it was 5,600,000 tons (Berliner Statistical Yearbook).

"The canalization of the Main from Mainz to Frankfurt, completed in 1886, created for Frankfurt a/M. during the first two years a totally new traffic (for water and rail) of 1,200,000 tons. The purely water traffic on the canalized Main, for Frankfurt a/M. increased from 156,000 tons in 1886, the year of the waterway's opening, to 1,087,000 tons in 1899."

COMPARISON OF FREIGHT RATES.

Between freight routes:

- (a) By rail and via Trieste or Fiume.
- (b) By water and via Danube and Black Sea ports.
- (c) By water and via Danube-Aegean waterway and Salonika port.

The toll is only part of the total freight charges which merchandise has to pay in transport, the other items being:

(1) The cost in ship-bottom, either in movement or in port, including cost of propulsion, waiting in port, time used in lading and unlading, interest on capital invested in boat, depreciation and insurance of boat, salaries and wages of captain and crew manning the boat, etc.

(2) Expenses—Harbor dues, expenses of lading and unlading the boat, insurance of merchandise, etc.

Freight rates for merchandise moved on waterways in Central Europe are computed according to a formula, which takes into account not only the above-mentioned items: (1) cost in ships' bottoms; and (2) expenses of harbor dues, etc.; but also the toll rate charges according to class of merchandise per standard distance and the transportation mileage.

The formula generally used in canal freight rate computations is that given by the renowned German waterway engineer Sympher.

In Central Europe, freight rates for merchandise on railroads are arrived at after a similar formula. The Sympher formula for canal freight rates is in fact only an adaptation of that used for the computation of rail freight rates.

The Sympher formula is as follows:

$$F = \left(\frac{B + H}{n} + 0.07 + r \right) \text{ ct/km,}$$

where:

B = cost in ships' bottom.

H = harbor dues and costs.

n = number of kilometers of transportation.

r = fixed canal toll-rate charge according to class of merchandise per standard distance (1 kilometer or 1 mile).

F = total freight costs for a given distance.

For a boat of 600 tons, this formula works as follows (German canal rates are taken):

B = 21c; H = 10.5c; r = 0.167c mean toll rate.

$$F = \left(\frac{21 + 10.5}{n} + 0.07 + 0.167 \right) \text{ ct/km.}$$

It may be interesting to reproduce a table of comparison of the Special Freight Tariff I, and the Exceptional Freight Tariff I, as was

used on the Austrian and Hungarian railroads, and the General Freight Tariff as used on the Austrian and Hungarian canals.

In addition to the tariff rates below, merchandise had to pay on those railroads fixed charges of 2.02c per 100 kilograms or 220 pounds. The unit-weight for freight (in the table) is: 100 kilograms or 220 pounds. The freight rates are given in cents, United States currency.

	RAILROAD		CANAL
Distance in Kilometers	Special Tariff I	Exceptional Tariff I	General Tariff
10	2.83c	2.02c	3.44c
20	3.64	2.02	3.64
30	4.86	2.63	3.84
40	5.37	3.03	4.05
50	6.88	3.84	4.25
60	8.10	4.05	4.45
70	9.11	4.65	4.65
80	10.33	5.26	4.86
90	11.35	5.67	5.06
100	12.35	6.27	5.26
200	23.78	13.57	7.09
300	29.78	15.60	9.11
400	35.86	19.65	10.94
500	39.91	22.48	12.96
600	43.96	25.36	14.99
700	48.01	28.16	16.81
800	52.06	30.99	18.84
900	56.12	33.83	20.86
1000	60.17	36.67	22.69
1100	64.22	39.50	24.71
1200	68.27	42.36	26.54
1300	72.32	45.20	28.56
1400	76.38	48.03	30.39

A few examples are given below for comparison of the through freight rates per ton of merchandise, bulk and piece goods:

(1) Inter-continental foreign over-sea trade of Germany and of Czecho-Slovakia.

(2) Serb, Croat and Slovene (Jugoslav) foreign over-sea trade.

(1) *Examples of Freight rates per ton of merchandise from places in Germany and in Czecho-Slovakia to places over-sea via Trieste, or Hamburg,—or via Black Sea-Danube ports, or via Danube-Aegean waterway and Salonika.*

A.

Paper from Magdeburg (Germany) to Smyrna (Asia Minor):

(a) Magdeburg via Hamburg to Smyrna:

Magdeburg-Hamburg (296 km.) on Elbe River by boat	\$0.51	\$1.25
Trans-shipment Hamburg48	.48
Hamburg-Smyrna	2.93	4.36

Freight per ton.....	\$3.92	\$6.09
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(b) Magdeburg-Salonika-Smyrna:

Magdeburg-Salonika (2,297 km.) in boat on Elbe to Dan- ube thence Danube-Aegean	\$4.84
Trans-shipment Salonika48
Salonika-Smyrna72

Freight per ton.....	\$6.04
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B.

Sugar from Schoenpriesen (Czecho-Slovakia) to Constantinople:

(a) Schoenpriesen via Trieste to Constantinople (railroad to tide-
water):

Schoenpriesen-Trieste (905 km.) (R. R. Special Tariff 2 for shipment by car load)	\$4.70
Trans-shipment Trieste61
Trieste-Constantinople	3.54

Freight per ton.....	\$8.85
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(b) Schoenpriesen via Elbe-Moldau-Danube Canal to Korneuburg
on Danube, thence by combined Danube and Black Sea
Lloyd S. S. Co., via Sulina to Constantinople:

Schoenpriesen-Korneuburg (boat Elbe-Moldau-Danube Canal)	\$0.83
Korneuburg-Constantinople (combined Lloyd S. S. Co.) ..	6.35
Iron Gates toll425

Freight per ton.....	\$7.605
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(c) Schoenpriesen, via Elbe and Elbe-Prerau-March Canal to Dan-
ube and via Danube-Aegean Canal to Salonika, and thence
to Constantinople:

Schoenpriesen-Salonika (2,027 km.) (shipped through in one boat)	\$4.29
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Trans-shipment Salonika61
Salonika-Constantinople	1.29
<hr/>	
Freight per ton.....	\$6.19

C.

Industrial Alcohol from Kolin (Czecho-Slovakia) to Smyrna (Asia Minor):

(a) Kolin via Prague and Trieste to Smyrna (R. R. to tidewater):	
Kolin-Prague (60 km.) (R. R. Except. Tariff I).....	\$0.64
Prague-Trieste (828 km.) (R. R. Except. Tariff I).....	3.05
Trans-shipment Trieste10
Trieste-Smyrna	4.78
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Freight per ton.....	\$8.57
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(b) Kolin-Prague-Smyrna via Danube-Aegean and Salonika (partly by railroad and partly by water to tidewater):

Kolin-Prague (R. R.)	\$0.64
Prague-Salonika (2,007 km.) (via Moldau-Danube, Danube and Danube-Aegean Canal)	4.23
Trans-shipment Salonika10
Salonika-Smyrna	1.42
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Freight per ton.....	\$6.39
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(c) Kolin-Smyrna (by water only to tidewater):

Kolin-Salonika (1,947 km.) (via Elbe-Prerau-March Canal, Danube and Danube-Aegean Canal).....	\$4.13
Trans-shipment Salonika10
Salonika-Smyrna	1.42
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Freight per ton.....	\$5.65
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(2) Freight rates per ton of merchandise on Yugoslav foreign over-sea trade routes via Fiume and via Danube-Aegean waterway compared.

A.

Flour from Zagreb (Croatia) to Smyrna (Asia Minor):

(a) Zagreb via Fiume to Smyrna (railroad to tidewater):

Zagreb-Fiume (205 km.) (R. R. Special Tariff I).....	\$2.53
Fiume trans-shipment61
Fiume-Smyrna	3.66
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Freight per ton.....	\$6.80
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(b) Zagreb via Danube-Aegean waterway and Salonika to Smyrna
(by water to tidewater):

Zagreb-Salonika (1,120 km.) (by boat via Danube-Aegean)	\$2.51
Salonika trans-shipment61
Salonika-Smyrna	1.19

Freight per ton..... \$4.31

B.

Pig-iron from Vares (in Bosnia) to tidewater:

(a) Vares via railroad to Fiume:

Vares-Fiume (R. R. Special Tariff 2).....	\$3.59
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(b) Vares via Danube-Aegean Canal to tidewater at Salonika (rail-
road and boat):

Vares-Doboj (120 km.) (R. R. Special Tariff 2).....	\$1.09
Doboj-Salonika (120 km.) (boat via Danube-Aegean).....	2.06

Freight per ton..... \$3.15

C.

General tariff freight rates from commercial centers in the State of
the Serbs, Croats and Slovenes (Yugoslavia) via Drava River or Sava
River and Danube-Aegean waterway to tidewater at Salonika, per ton of
merchandise:

Maribor (1,138 km.)	\$2.52
Zagreb (1,120 km.)	2.51
Sissak (1,080 km.)	2.43
Doboj (Bosnia) (890 km.)	2.06
Osjek (860 km.)	2.00
Novi-Sad (780 km.)	1.83
Beograd-Zemun (674 km.)	1.63

APPENDIX.

I.

ABSTRACTS.

FROM THE REPORTS MADE BY PROFESSOR N. I. STAMENKOVICH IN CON-
NECTION WITH THE GENERAL PROJECT AND THE
GENERAL ESTIMATES OF COSTS.

*The scientific study of the Morava River and its drainage basin
and the gathering of hydrological data was relatively easy, whereas
prior to the Balkan Wars such scientific study of the Vardar River
and its drainage basin, then within Turkish territory, was accom-
panied with enormous difficulties.*

I.

THE MORAVA RIVER.

In order to judge approximately of the navigability of the Morava River, the following hydrographical and hydrological data can be used.

The Morava River has two branches. One, taking its source in the Golya Mountains and joined by the river Ibar, is called the Western Morava. The second, which rises on the watershed of Preshevo and in the mountain ranges west of the watershed is called the southern, or eastern or Binatchka Morava. These two branches join their waters at Stalatch forming the Great Morava, which empties into the Danube at Dubravitza. One of the important tributaries of the Vardar River also takes rise on the watershed of Preshevo and in the mountain ranges east of the watershed. A railroad line follows these river courses beginning at Smederevo on the Danube, and thence through the valley of the Great and Southern Morava, crossing the watershed of Preshevo, enters the valley of the Vardar, which it follows up to Salonika.

Length of the Morava from the Danube to the watershed of Preshevo is:

(1) Great Morava—Danube to Stalatch, 216 kilometers, or 133 miles.

(2) Southern Morava—Stalatch to watershed, 296 kilometers, or 183 miles,

giving for the Morava a total length of 512 kilometers, or 317 miles.

The total surface drained:

(1) Southern Morava up to Stalatch, 15,436 square kilometers, or 5,958 square miles.

(2) Western Morava up to Stalatch, 16,179 square kilometers, or 6,245 square miles.

(3) Great Morava from Stalatch to Danube, 6,655 square kilometers, or 2,569 square miles.

Giving as total for the whole surface drained by the Morava River (drainage basin) from its watershed to the Danube, 38,270 square kilometers, or 14,773 square miles.

The watercourse of the Morava is very tortuous, and with slight exceptions the river is embedded in its own deposits. Its bed is subject to constant changes, and the spring high waters cause displacement of the river bed.

The Southern Morava passes through three natural river gorges:

(1) The gorge from Vladitchin Han to Gredelitza (28 kilometers, or 17 miles long).

(2) A very short one near Kurvingrad (only some few hundred meters long); and

(3) The gorge from Djunis to Stalatch (14 kilometers, or 8.6 miles long).

From Stalatch on towards the Danube the valley of the Great Morava is from 1,500 meters (4,950 feet) to 3,000 meters (9,900 feet) wide, with the exception of some 5 kilometers (3.1 miles) near Bagredan, where the valley narrows to from about 600 meters (1,980 feet) to 800 meters (2,640 feet). This entire valley is flooded in spring during the high-water stage. The width of the river-bed of the Great Morava is more or less even, varying from 130 meters (420 feet) to 200 meters (660 feet). The water quantity measured during low water has been found near Tchuperia to be 44 cubic meters (1,443.6 cubic feet) per second. The width of the river bed conditions its shallowness. The average minimum depth (low water) from Stalatch to Bagredan is from 1.0 meter (3.3 feet) to 1.20 meters (3.9 feet), and from Bagredan to the Danube from 1.4 meters (4.6 feet) to 1.6 meters (5.2 feet). The velocity, at low water, minimum volume, has been found to be 0.44 meter (1.4 feet) to 0.6 meter (1.9 feet) per second. The river banks are in general high and rise above the low-water line from about 3 meters (9.9 feet) to 3.5 meters (11.5 feet). Fluctuations are sudden and frequent, and the level difference between high and low water level in the Great Morava is from 4.5 meters (14.8 feet) to 5.0 meters (16.5 feet).

During high-water stage at flood time the Morava carries great quantities of deposit composed of sand and gravel. Larger pebbles of from 6 centimeters (2.5 inches) to 8 centimeters (3 inches) occur seldom, and are only found at places where swift mountain streams empty into the river. At Tchupria the water quantity has been measured as about 200 cubic meters, or 7,062 cubic feet per second, during ordinary (mean) water stage, and as averaging about 2,000 cubic meters, or 70,620 cubic feet per second during high water. Quantities of water amounting to 6,000 cubic meters (21,186 cubic feet) per second occur only in case of exceptional floods, when then the whole valley is submerged. But those floods are very rare. Owing to the fact that the Morava is not regulated there is much driftwood embedded, which like the numerous water-mills along the river, cause the formation of bars in the river bed and much injury to the river banks.

In the Danube at the mouth of the Morava, the low-water mark is 65 meters (214 feet) above sea level, and the high-water mark is 72 meters (237 feet) above sea level. The altitude of the watershed between the Southern Morava and the Vardar at Preshevo is 460 meters (1,508 feet), measured near the railroad station of Preshevo. Comparing the altitude of the high-water mark at the Danube with the altitude of the watershed at Preshevo, *i. e.*, 72 meters (237 feet) with 460 meters (1,508 feet) we obtain the total fall of the Morava River from the watershed to

the Danube to be 388 meters (1,281 feet). Considering the total length of the river as 512 kilometers (317 miles) the fall per 1,000 meters (3,280 feet—one kilometer) is $388/512$, or 0.076 per cent. That fall is unequally divided along the course: From Stalatch to the Danube the fall is 70 meters (231 feet), or 0.03 per cent.; from Stalatch to Kurvingrad the fall is 48 meters (158 feet), or 0.056 per cent., and from Kurvingrad to the watershed the average fall is 0.18 per cent. The sharpest fall is through the gorge of Grdelitza, where it rises to 0.25 per cent.

The Morava often freezes in winter. The freezing season begins in the middle of December and ends in February. The ice thickness is generally from 20 centimeters (8 inches) to 30 centimeters (12 inches). In severe winters thicknesses up to 50 centimeters (20 inches) have been observed. The winding of the river bed and the relative slow flow causes often the ice to bank, preventing early freeing of the river from ice. In autumn and in spring the river valley is sometimes subject to heavy and thick fog.

II.

THE VARDAR RIVER.

The river Vardar like the Morava rises through a tributary on the watershed of Preshevo. The length of the Vardar taken from Preshevo to the Aegean Sea, along its tributaries, the Bainka and Ptchinya, which rise on Preshevo watershed is 370 kilometers (229 miles). The altitude of Preshevo being 460 meters (1,508 feet) above sea-level, the fall of the Vardar is therefore per 1,000 meters (3,280 feet) $460/370$, or 0.113 per cent.

The total surface drained into the Vardar (drainage basin) is 27,925 square kilometers, or 10,680 square miles.

The water quantity of the Vardar, measured during low water, between Salonika and Demir-Kapu, was found to be averaging 34 cubic meters (1,191 cubic feet) per second.

No exact and accurate data concerning the water quantity, the velocity and the nature of that river is available, as the political conditions under Turkey up to the Balkan War made all hydrological study impossible, and since then this part of the Balkan peninsula has been swept by wars, preventing any work of that nature. As the data at hand are only approximations they are not given here. But it can be said in general that the same conditions which prevail with the Morava prevail with the Vardar, and conclusions arrived at for the Morava will be applicable in general outline for the Vardar River.

III.

THE MORAVA AND THE VARDAR AS WATERWAYS CONNECTING THE DANUBE WITH THE AEGEAN SEA.

Both rivers, Morava and Vardar, are at present in a state of nature, there never having been made any attempt to canalize or train their beds. The beds of both rivers are neglected and are not navigable by freight-carrying craft. On the Morava and on the lower Vardar navigation is carried on from time to time by means of rafts.

Attempts were made in 1866 and 1867 to navigate the Morava between the Danube and Stalatch with large boats. In 1866 boats laden with 80 tons of wheat were put on the Morava at Tchupria, but were unable to reach the Danube, on account of obstructions in the river bed, driftwood, etc. These boats had a draught of 1.0 meter (3.3 feet). A second attempt was made in 1867 by the Danube Steamship Company with a steamboat, which went from the Danube to Tchupria and returned to the Danube without difficulty, but since then navigation has only been by rafts.

In making a general project for the waterway Danube-Aegean Sea (Morava-Vardar), the following questions, among others, had to be considered:

(1) Is it possible and to what extent, to make the rivers Morava and Vardar navigable by ordinary regulation?

(2) Can the rivers Morava and Vardar be made navigable by canalization, and in which section is that possible?

(3) What dimensions should be given to a navigable canal built through the valleys of the Southern or Binatchka Morava and the Vardar?

(1) Is it possible and to what extent, to make the rivers Morava and Vardar navigable by ordinary regulation of the river courses?

The answer depends upon the quantity of water and the fall of these rivers during low water, as well as upon the size of boats which will use this water route and which again will depend upon the importance of the waterway in general.

The importance of this Danube-Aegean inland water route is shown by the fact that in connection with the German and Austrian canals connecting the Danube, Elbe, Main, Rhine, Oder, and Vistula, it will create the shortest inland water road between the North Sea, the Baltic and the Aegean Sea, Suez, and Indian Ocean. Hence the same boats capable of navigating upon the Danube, the Rhine, the Oder, the Elbe, the Vistula, and the German and Austrian canals, should be able to travel on the Morava and Vardar without requiring a trans-shipment of cargo.

The conditions laid down by law for the navigable waterways, canals, rivers in Germany and Austria is that they should be of such dimension

as to permit during low water the navigation of vessels of at least 600 tons burden, hence the depth at low water must be at least 2.1 meters (6.9 feet). In respect to width the condition is that two vessels shall be able to pass each other.

Having regard to the size of vessels employed on the Danube, and the fall of the Morava and Vardar, the minimum width for navigation has to be 40 meters (132 feet), and the cross-section of a navigable water road has therefore to be of minimum $40 \times 2.1 = 84$ square meters (904 square feet) area, during low water stage (*i. e.*, driest season).

The water quantity of the Great Morava from Stalatch to the Danube averages 44 cubic meters per second. The water quantity of the Vardar from Salonika up to Demir-Kapu is not more than an average of 34 cubic meters per second.

Taking a water quantity of 44 cubic meters per second, we obtain for a sectional area of 84 square meters, a mean velocity of

$$V = \frac{44}{84} = 0.524 \text{ meter.}$$

The fall corresponding to that velocity will be obtained after the equation

$$V = 1.2 \times R^{3/4} \sqrt{P} = 0.524 \text{ meter.}$$

R is the hydraulic depth, or hydraulic radius of the sectional area of the water road.

P is the fall per 1,000 meters (1 kilometer) (0/00) during low water.

Assuming the cross-section to be rectangular, width 40 meters (132 feet), depth 2.1 meters (6.9 feet), we obtain

$$R = 1.9 \text{ meters.}$$

$$R^{3/4} = 1.62.$$

$$\text{thus—} 1.2 \times 1.62 \sqrt{P} = 0.524, \text{ or}$$

$$P = \left(\frac{0.524}{1.944} \right)^2 = 0.07236 \text{ per cent.}$$

Hence the velocity of 0.524 corresponds to a fall of 0.007236 per cent.

As the Great Morava after the regulation of its river will have a mean fall of 0.04 per cent., and the Vardar in its lower parts will have a fall of about twice that, or 0.08 per cent., the velocity during low water will doubtless be greater than 0.524 meter, and hence the water quantity to obtain a sectional area of 84 square meters (904 square feet) will have to be greater.

For the Morava with a fall of 0.04 per cent., the velocity would be

$$R = 1.9 \text{ meters; } F = 84 \text{ square meters.}$$

$$V = 1.944 \sqrt{0.4} = 1.23 \text{ meters;}$$

and the corresponding water quantity :

$$Q = 84 \times 1.23 = 103.3 \text{ cubic meters (3,648 cubic feet).}$$

However, during low water there is never more than 44 cubic meters per second of water in the Great Morava.

Hence the conclusion is that considering the fall and quantity of water, during low-water stage, the necessary navigation depth of 2.1 meters (6.9 feet) cannot be obtained in the Morava. The depth obtainable for a width of 40 meters, and a water quantity of 44 cubic meters is only 1.24 meters (4.1 feet).

Therefore, a simple regulation of the Morava River will not give the required navigation depth of 2.1 meters, but only a depth of 1.2 meters, and boats of 600 tons burden could not navigate on the Morava during low-water stage.

As the water quantity measured in the Vardar River is smaller than that of the Morava, and the fall of that river is greater than that of the Morava, it is very doubtful if simple regulation can make the Vardar River capable of having the required depth for navigation, during low water. Hence a second question must be answered.

(2) Can the rivers Morava and Vardar be made navigable by canalization, and in which sections is that possible?

When rivers are made navigable by canalization weirs or dams are used to retard the fall in the water level, so that during low water the required navigation depth is obtained in all parts of the river. Each weir or dam is necessarily provided with gates or locks permitting the passage of vessels. Such dams and gates naturally increase the cost of construction. Therefore the advisability of canalizing a river depends mainly upon the amount of fall in the water level as well as upon the height of the river banks above water level during low water. Should navigation be possible in a river during mean water with open weirs, it is necessary first to regulate the bed of the river, and during low water to break the fall of the water level by movable weirs in such a manner so as to obtain reaches or ponds with the slightest possible fall.

In regard to the rivers Morava and Vardar, the following points were established :

Great Morava:

- (1) From the Danube to Stalatch a low-water depth of 1.2 meters (3.9 feet) can be obtained.
- (2) Through preliminary regulation the length of 216 kilometers (134 miles) can be reduced to 154 kilometers (95 miles).
- (3) The absolute fall from Stalatch to the Danube is 67 meters (221 feet), hence the fall per kilometer, after correction of the river course will be 0.4 meter (1.3 feet).
- (4) The average height of the river bank above the low-water line

is 3.5 meters (11.5 feet) to 4 meters (13.2 feet), hence the low-water level can be raised by 3.5 meters (11 feet).

(5) As the minimum navigation depth must be 2.5 meters (8.2 feet) at low water, the water level will have to be raised by means of weirs, at the upper end of each reach by 1.3 meters (4.3 feet), (2.5-1.2), and by 3.5 meters (11.5 feet) at the lower end.

(6) Taking into consideration only the hydrostatic gravity the length of each reach will be in the average:

$$D = \frac{3.5 + 1.2 - 2.5}{0.4} = 5.5 \text{ kilometers (3.4 miles).}$$

(7) Hence along the entire length of 154 kilometers (95 miles) it will be necessary to construct a weir every 5.5 kilometers (3.4 miles), which would give 28 weirs and 27 reaches for that length.

(8) The above shows that the *Great Morava*, from the Danube to Stalatch can be made *navigable* by means of *canalization*.

Southern or Binatchka Morava:

(9) The Southern Morava from Stalatch to the watershed has a length of 296 kilometers (183 miles), of which 226 kilometers (140 miles) only come here into consideration.

(10) This length of 226 kilometers (140 miles) could be reduced by regulation to 190 kilometers (118 miles). As the absolute fall for this length of river course is about 247 meters (815 feet), the fall per kilometer is $247/190 = 1.3$ meters (4.3 feet).

(11) Its average water quantity during low-water stage as found cannot exceed 20 cubic meters (700 cubic feet); therefore, the greatest depth obtainable during low water is not more than 0.7 meter (2.3 feet). Hence to obtain the required depth of 3.5 meters (11.5 feet) the reaches would have to be shorter than 2 kilometers (1.3 miles), which would necessitate about 100 weirs for this length, making the construction exceedingly costly and the traffic too slow.

(12) Therefore, a *canalization* of the *Southern Morava* for making it navigable is *out of question*.

(13) The data possessed concerning that river shows its fall to be considerably greater and its water quantity smaller than that of the Morava River, hence at present the conclusions in regard to that river will be the same as those in regard to the Southern Morava, *i. e.*, the *Vardar* cannot be made *navigable* by means of *canalization*, with the exception perhaps of that section of the river extending from its mouth on the Aegean Sea to the point where it receives the River Koza-Dere.

(14) But in regard to this section of the Vardar River the circumstance that the mouth of the Vardar is at a distance of 20 kilometers (12.5 miles) from the good harbor of Salonika, which port, considering the importance of the projected waterway, should be made the canal terminus,

outweighs any other consideration, so that the conclusion is arrived at that the lower section of the Vardar River should be abandoned and a canal to Salonika built in its place.

In summing up the above points the conclusion is reached that a *waterway* through the valley of the *Southern Morava* and that of the *Vardar* can only be obtained by the *construction* of a *navigable canal*.

This gives us the third question:

(3) *What dimensions should be given to a navigable canal built through the valleys of the Southern Morava and the Vardar?*

A canal, as an artificial waterway, can be independent of the nature of the respective rivers. Hence its dimensions should be determined solely by the traffic to be expected and the financial considerations regarding its construction.

In considering the question of canalizing the Great Morava, dimensions were laid down which during the low-water stage will permit the use of boats of 600 tons burden fully laden. However, during the mean-water season, which lasts nearly twice as long than the low-water stage, the canalization of that river will permit the navigation of vessels larger than those of 600 tons burden, provided the locks and gates are given correspondingly larger dimensions.

Therefore, considering the international importance of that waterway, it would not be rational to limit the canal dimensions to those required for vessels of 600 tons burden. Further, in a canalized river the resistance to vessels in motion is smaller than the resistance to the same vessel in a navigable canal, hence the dimensions of a canal should always be greater than those required by traffic in the canalized section of a river during low water. Finally, in a canalized river the navigation conditions could always be improved at relatively small costs, or even a canal, parallel to the river could be constructed later on, but to change the dimensions, or make changes, in an already constructed canal of a certain type is difficult and extremely costly.

Therefore, based on the character of the ground and considering that the boats (barges) employed in the traffic on the lower Danube are of 1,800 tons burden, with a length of 87 meters (287 feet), a width of 10.2 meters (33.6 feet), and a draught of 2.5 meters (8.2 feet), the canal which would start from Stalatch southward through the valley of the Southern Morava, pass over the watershed of Preshevo, and thence through the valley of the Vardar to Salonika and the Aegean Sea ought to be projected so as to permit the use of vessels of 1,800 tons burden, and of such a width that vessels can pass each other at any point of the canal.

(4) *Conclusions:* In view of these requirements the following points for making the general project have been laid down:

(1) The length of each level-reach, from lock to lock not to be less than 4 kilometers or 2.5 miles.

(2) The minimum water-depth to be 3.0 meters (9.9 feet); the minimum bottom width of the canal to be 22.5 meters (73.8 feet); the sectional area below waterline to be not less than 86 square meters, or 925.7 square feet.

(3) The angle of slope of the canal side must vary with the nature of the soil, but the following was adopted:

(a) Below waterline, from bottom, the natural slope of 1 : 2.

(b) Up to 1 meter below the waterline and 1 meter above the waterline, the slope to be 1 : 3.

(c) The remaining upper part, embankment, can be given a slope of 1 : 1.5.

(4) At a height of 1.5 meters above the waterline, on both sides of the canal, to be constructed towpaths of a width of 3.5 meters for the haulage of boats.

(5) The towpaths for haulage to be at least 0.5 meter above the high-water mark of the nearest river.

(6) Near ports and in appropriated places where boats may be required to turn, the width of the canal bottom shall be not less than 100 meters (330 feet).

(7) At curves the radius of the canal axis to be not less than 400 meters (1,320 feet). Where the radius is greater than 2,000 meters (6,600 feet) the canal bed can retain its normal width, but where the radius is less than 2,000 meters (6,600 feet) the canal bottom shall be widened, in meters, at the curve summits on the concave side in proportion to the radius, according to the equation:

$$s_1 = s + 2(r - \sqrt{r^2 - 1900}).$$

s_1 = width of bottom at curve's summit.

s = normal width of bottom.

r = radius of curve of canal axis.

(8) The widening at the curve to be strengthened by reënforcing the slope of the embankment on the concave side.

(9) In tunnels the air-width of the canal between the tow-paths shall not be less than 10.6 meters (35 feet), and the minimum water depth 4.0 meters (13.2 feet).

(10) Under railway and road bridges the air-width of the canal to be a minimum of 40 meters (132 feet), and the water-line of the canal to have at least 4 meters (13.2 feet) clearance below the low edge of the bridge construction.

(11) At all crossings (river, road, railroad, etc.), the cross-section of the aqueduct to be of rectangular shape and of 24 meters (79 feet), and 4 meters (13.2 feet) depth.

(12) The locks to have a minimum length of 88 meters (290 feet), a minimum width of 10.6 meters (35 feet), and a depth of 4.0 meters (13.2 feet).

(13) The locks to be of the ordinary hydrostatic type without mechanical hoists.

(14) 100 meters (330 feet) in front of the head-bay and 100 meters (330 feet) back of the after-bay the water depth to be a minimum of 4 meters (13.2 feet).

(15) The lay-out of the locks to be such as to permit their duplication should future traffic so require.

(16) The difference of level at the adjoining reaches at locks not to be greater than 9.5 meters (31.5 feet). Where a greater level difference is needed the locks to be multiple of the "flight" type.

(17) All locks of a level difference greater than 7 meters (23.1 feet) to have a side-pond.

(18) The summit-level and reservoir (artificial lake) to have a depth greater than 4 meters (13.2 feet).

(19) The inflow of greater tributaries into the canal to be avoided.

(20) All bridge and dam foundations to be such in construction that the canal bottom could be lowered by 1 meter (3.3 feet).

(21) Wherever possible there shall be constructed special side-canal and ponds to gather and bring water from nearby water-courses, in such quantity as can be obtained, in order to make available at the locks the greatest possible water-power for hydro-electric purposes, furnishing electric power for the propulsion of the canal boats.

(22) In order that the water flow may fully be utilized in generating hydro-electric power, the fall in such side canals and ponds must not cause a greater velocity of flow than 0.2 meter per second.

IV.

PRELIMINARY LAY-OUT TRACÉE OF THE CANAL.

In the preliminary lay-out (survey), in addition to personal inspection of the ground, sketches, measurements, levels, etc., were used:

(1) The levels and surveys made by the Royal Serbian State Railroad, which the management of that road graciously had put at the disposal of the Chief-Engineer, Professor Stamenkovich.

(2) The surveys and maps made by the General Staff of the Serbian Army, at a scale of 1:25,000 and 1:75,000.

(3) For the Vardar portion the maps made by the General Staff of the Austrian Army for Turkey were used, 1:200,000.

In the preliminary survey, in the section of the Great Morava, it was desired to avoid as much as possible sharp curves for the low-water bed, but as at the same time the water course was not to be shortened over much, so as not to increase the relative fall and with it to increase the

number of weirs and locks, the smaller curves were retained. But further detail study and survey will show where and to what extent it would be justifiable to diverge from this preliminary lay-out. This tracee shortens the course of the Morava from Stalatch to the Danube by 46.1 kilometers (28.6 miles), making the total length of the canalized Morava 154.7 kilometers (96 miles). This section has been divided into 27 reaches with 28 locks, the minimum length of a reach to be 5.12 kilometers (3.2 miles).

From the junction point of the Western Morava and Southern Morava the survey runs along the right bank of the Southern Morava up to the gorge of Stalatch, through which the bed of the Southern Morava is used, provided, that the low-water level is raised by weirs so as to obtain the required navigation depth. In this way the passage through the gorge of Stalatch is accomplished by three locks. Only after the exit from the gorge the bed of the Morava is abandoned and from that point starts the line of the projected canal. The section from Stalatch up to the watershed of Preshevo is 198.3 kilometers (124 miles). It has been divided into 36 reaches with as many locks.

Thus the total length of the Morava from the Danube up to the watershed is projected to be 353 kilometers (219 miles), with 64 locks.

The summit-level at Preshevo with reservoir (artificial lake) is projected to 12 kilometers (7.5 miles) long, distance between locks, with the water-level at an altitude of 438.7 meters (1,438.9 feet) above the datum line. The further detail survey will probably show that this summit-level could be made longer—distance between dams and locks—and somewhat lower in altitude.

From Preshevo the descent towards Kumanovo and Skoplya is steep. Here three multiple locks ("flight" type) have been foreseen, each to overcome a level difference of 19 meters (62.3 feet). Also to avoid too short reaches, three locks have been here foreseen, two for level differences of 38 meters (125 feet), and one for a level difference of 37 meters (122 feet). When further detail work makes available a more exact survey of the situation, and more reliable particulars regarding the water-quantity obtainable for this part of the canal, then only will it be possible to decide whether or not it would be best to avoid here artificial hoists and replace them by ordinary hydrostatic locks.

The entire descent from Preshevo through the Vardar Valley to tide-water 248 kilometers (154 miles) in length, is accomplished by 40 locks.

The Danube-Aegean waterway will therefore require for its entire length of 612 kilometers (380 miles) 104 locks, of which 28 will be in the canalized section of the Morava, and 76 on the canal. Besides this the waterway requires the construction of 30 movable weirs, 9 aqueducts across larger watercourses, also 9 aqueducts crossing over railroad lines, and at one point a tunnel-crossing beneath the railroad track.

The Length Profile (Appendix C, No. 3) shows the position of the individual locks as well as the level difference at each lock.

All the data at present at hand indicates that the detail survey will make possible a final lay-out having a smaller number of locks and a greater length for each reach, but also probably a greater total length of the waterway. Further the detail survey may also show that it may be advisable in the interest of a large traffic to abandon the Morava altogether and to construct from Smederevo or Dubravitzza on the Danube a canal along the whole length of the Great Morava to Stalatch. In that case the waterway would be completely independent of the somewhat capricious nature of the Great Morava; further, the waterway would be of the same type throughout its entire length, which would be advantageous to traffic. In this case the number of locks could probably be considerably reduced, and water for irrigation purposes and hydro-electric power would become available to a greater extent than would be possible with a canalized river.

All such changes in the project would entail a considerable increase in the construction costs. Therefore, only by comparing the cost-estimates could the question be answered as to whether it would be more efficient and less costly in the long run to abandon the canalization of the Great Morava and to construct in the first place an artificial canal throughout the whole length from the Danube to the Aegean Sea, or whether it would be better to canalize the Morava first, and only when increases of traffic shall so require construct a canal from the Danube to Stalatch.

V.

WATER SUPPLY.

The water quantity required for a navigable canal must provide:

(1) For the water consumed by the passage of vessels through the locks.

(2) For the loss of water through evaporation, underground seepage, and gate-leakage.

The loss through consumption in locks depends on the number of boats passing through and the level difference to be overcome. A hydrostatic lock of the following dimensions—length 88 meters (290 feet), width 10.6 meters (35 feet), and level difference of 9.5 meters (31 feet) requires 8,900 cubic meters (311,500 cubic feet) of water. To save water each lock possesses a side-pond.

Let us assume that there are three such side-ponds, then the water-quantity required for filling the lock-chamber is:

$$Q = \frac{2 \times 8,900}{5} = 3,560 \text{ cubic meters.}$$

Let us assume about 40 fillings during 24 hours, then the total water quantity required will be $40 \times 3,560$, or 142,400 cubic meters.

The loss through evaporation can be assumed at 5 millimeters per 24 hours for each square meter of surface. Supposing the water surface of the canal to be 18,000,000 square meters, then the loss of water through evaporation will be for 24 hours:

$$18,000,000 \times 0.005 = 90,000 \text{ cubic meters.}$$

The loss through underground seepage can be assumed to be 0.5 cubic meter per current meter of canal length. Hence, that loss for 450 kilometers of length (less the passage through the gorge of Stalatch) will be

$$450,000 \times 0.5 = 225,000 \text{ cubic meters.}$$

Finally the leakage through gates and other causes can be assumed to be 10,000 cubic meters per 24 hours.

Therefore, we obtain as total loss of water for every 24 hours:

$142,000 + 90,000 + 225,000 + 10,000 = 467,400$ cubic meters,
which gives us a required water quantity per second of

$$\frac{467,400}{86,400} = 5.41 \text{ cubic meters.}$$

The reservoir (artificial lake) at Preshevo is not situated at the highest point of the watershed and in the neighborhood there are a number of small rivers and streams whose waters could be caught and directed into the canal. Besides at the worst there would be available the water of the Binatchka Morava, which has a drainage basin of 2,000 square kilometers, as well as the water of the Ptchinya, with a drainage basin of an equal size to that of the Binatchka Morava.

The losses through consumption, seepage, leakage and evaporation could also be compensated further by supplying the canal below Preshevo, on the northern side, with water from the Southern Morava, and on the southern side with water from the Vardar.

But should, however, further investigation show, which is very unlikely, that the necessary water quantity could not be obtained on the watershed, then either water would have to be raised artificially or a certain number of locks in the upper section would have to be replaced by mechanical hoists.

However, the ground above the canal survey is suitable, nearly along its entire length, for the construction of collecting basins or ponds, and hence the water supply will cause no difficulty whatsoever. There is even a probability that the water supply will be in such abundance that the level difference between the individual reaches could be increased and thus the number of locks reduced.

VI.

COST OF CONSTRUCTION.

The general estimate of costs shows:

(1) The canalization of the Great Morava, 155.3 kilometers in length, including weirs, dams, and locks in the gorge of Stalatch, together with three ports to be of a total cost of \$7,321,500, or \$47,244 per kilometer.

(2) The construction of a navigable canal from Stalatch across the watershed of Preshevo, thence descending into the valley of the Vardar, and following that valley up to the sea at Salonika, 456.7 kilometers in length including locks and ports, to be of a total cost of \$50,886,800, or \$111,425 per kilometer.

(3) The sum of \$8,191,600 forseen in the estimate of costs under III for preliminary works, management, supervision during construction, interest on capital, etc., is composed of: (a) \$878,400 to cover such expenses for the canalization of the Great Morava; and (b) \$7,313,200 to cover such expenses on the canal.

These sums added to the above-estimated costs give for the canalization of the Great Morava a sum of \$8,200,000, or \$52,800 per kilometer, and for the construction of the canal a sum of \$58,200,000, or \$127,850 per kilometer.

Thus the estimated total cost of the entire waterway Danube-Aegean Sea is \$66,400,000, or an average of \$108,500 per kilometer.

APPENDIX.

2.

GENERAL ESTIMATE OF COSTS.

I.—Canalization of the Morava River.

(1) Twenty-six locks, level-difference of 2.2 m. (7.2 ft.) at \$64,000	\$1,664,000
(2) One lock, level-difference of 5.0 m. (16.5 ft.)	116,000
(3) Two locks, level-difference of 7.0 m. (23.1 ft.), at \$156,000	312,000
(4) One lock, level-difference of 7.5 m. (24.7 ft.)	166,000
(5) Thirty movable weirs, each in average 150 m. (495 ft.) long, at \$76,000	2,280,000
(6) Regulating work, Great Morava, from Danube to Sta- latch, length 155.3 km. (96.2 miles), at \$12,000 per kilometer	1,863,000
(7) Three harbors at \$300,000	900,000
Total	<hr/> \$7,321,600

II.—Construction of Canal.

(1) Eight locks, level-difference 6 m. (19.8 ft.), at \$136,000	\$1,088,000
(2) Six locks, level-difference 7 m. (23.1 ft.), at \$156,000..	936,000
(3) Twenty-one locks, level-difference 8 m. (26.4 ft.), at \$182,000	3,822,000
(4) Two locks, level-difference 8.5 m. (28 ft.), at \$199,200..	398,400
(5) Fifteen locks, level-difference 9 m. (29.7 ft.), at \$220,000	3,300,000
(6) Fifteen locks, level-difference 9.5 m. (31.3 ft.), at \$240,000	3,600,000
(7) Three two-step locks, level-difference 19 m. (62.7 ft.), at \$320,000	960,000
(8) One lock level-difference 37 m. (122 ft.).....	1,040,000
(9) Two locks, level difference 38 m. (125.5 ft.), at \$1,160,000	2,320,000
(10) One lock, level-difference 6.2 m. (20.5 ft.).....	140,000
(11) One hundred and nine kilometers (67.6 miles) of canal in fairly heavy ground, with aqueducts and other works, except locks, at \$80,000 the kilometer.....	8,720,000
(12) Three hundred forty-seven kilometers, seven hundred meters (215.5 miles) of canal in light ground with aqueducts, tunnel, bridges and other works, except locks, at \$60,000 per kilometer.....	20,862,000
(13) Ponds and other constructions for collecting water.....	2,000,000
(14) Harbors and stopping places.....	1,700,000
Total.....	\$50,886,800

III.—Preliminary Expenses.

Preliminary works, detail survey, management and supervision of construction work, maintenance, interest on capital, and unforeseen expenses	\$8,191,600
Of which sum has to be counted towards the cost of regulat- ing the Great Morava	878,400
And toward the cost of constructing the navigable canal.....	7,313,200

Total Costs.

I. Canalization of the Morava River.....	\$7,321,600
II. Construction of navigable canal	50,886,800
III. Preliminary expenses, fixed charges	8,191,600
Total.....	\$66,380,000

II.

CORRESPONDENCE AND OTHER MATTER DIRECTLY
CONNECTED WITH THE WATERWAY PROJECT.

CORRESPONDENCE.

Translation.

I.

BELGRADE, 22/XI-5/XII, 1908.

*To Prince Lazarovich-Hrebelianovich,
London, England.*

Dear Sir:

Your letter of November 20, n. s., came to my hands, November 30, n. s. In acknowledging its receipt I have also the honor to say that I received from your bank information that a sum of 5,000 dinars (\$1,000) has been put to my credit.

Up to the present my work consisted primarily in gathering the fullest possible data required in the technical elaboration of the general project. My purpose is, in agreement with our understanding, to be in the position to clearly show the technical feasibility of the project and so enable you and your friends to decide if expenditures for further work of a preliminary nature would be warranted.

Your letter conveys to me the impression that my first reports gave you all the data required for such a decision without the necessity of waiting for my second part of reports. Therefore, following your request, I am sending you an outline of what, in my opinion, your further action should be.

The ideas you express are, to my best belief, as time will show, perfectly correct. The steps immediately to be taken are to obtain the necessary permission to undertake full detail survey of the ground as well as the study of certain other important questions, all of which will take a great deal of time.

In a couple of days I shall mail you a detailed answer to every one of the questions contained in your letter. But for the present a few of my ideas on the subject will I think be sufficient.

(1) Considering the situation in our country—and what goes for us goes for Turkey—a concession and not a preliminary concession must be applied for. The terms of that concession has to be separated into two parts—one, to cover all preliminary work, the elaboration of details of the project—the other, to cover construction and exploitation in particular. Our laws do not permit the Government to give a preliminary concession.

(2) The draft of the concession must take the form of a legislative bill, as it has to be submitted to Parliament, that body alone can deal with such matters.

(3) If you desire I shall send you such a draft—but it would be

well to let me have beforehand any particular point you should like to have included. In case those points are not quite in line with what is customary with us here, they should be supported by citations of precedent cases taken from similar concessions granted in England, France, or the United States.

(4) The draft, after being completed, should be submitted for approval to the Serbian and Turkish governments. The draft submitted should be accompanied with evidences of bona-fides and guarantees covering the capacity of executing the proposed public work.

(5) As the procedure in the best case, *i. e.*, if Parliament should be in session, would take not less than three to six months, it will be wise to ask, at the same time as the required approval, a permit covering not less than three years for the purpose of undertaking the necessary preliminary works required for the elaboration of the detailed technical project. This last is absolutely necessary so as to bind the Government down not to permit anyone else to undertake those works.

(6) My suggestion is to prepare the draft immediately, not to wait for the second part of my reports, which second part will only deal with the technical side of the project, and is in fact only an enlargement, on the technical side, of the first reports already submitted to you. This second part of the reports is elaborated with a view to have them serve as basis for the execution of the preliminary works and the detail studies.

Awaiting your answer, pray accept the assurance of my highest esteem.

N. I. STAMENKOVICH,
Professor, Belgrade University.

Translation.

2.

BELGRADE, I/14/II, 1909.

*To Prince Lazarovich-Hrebelianovich,
New York, U. S. A.*

Dear Sir :

I have the honor to send you the "General Project," together with the Reports, and an Estimate of Costs. I had it ready some eight days ago, but Mr. Savich was very busy with official matters and had not been able to attend to the English translation of those papers. Hence I am sending you the Serb originals. Mr. Savich promises to send you the translations as soon as they will be ready.

I hope my work, my reports and elaborate, up to now, meets with your full approval and that your friends will become convinced that the project is of value.

The terms of the concession, as also the estimate of costs for the preliminary work now to be undertaken, were discussed by me with Mr. Savich, who will report to you and will send you all the papers on that subject.

On this occasion allow me to ask you to be good enough to convey my best regards to Madam, and accept the most heartiest greetings from your sincere

N. I. STAMENKOVICH,
Professor in Belgrade University.

Translation.

3.

THE CORRESPONDENT OF THE "RUSSKOYE SLOVO"

13 WARWICK ROAD, EARLS COURT

LONDON, S. W.

17 December, 1908.

My Dear Prince:

When this letter reaches you I shall be already on my way to Serbia. After your departure a change took place in my situation. Two or three days ago Minister Milovanovich asked me by telegram if I could consider to accept the position of Chief of the Press Bureau in his Department (Foreign Office). And if I accept to join my post as soon as possible. It is not necessary to explain to you all the reasons for and against my accepting the offer (those reasons are well known to you), and I also know that you would have strongly advised me to accept. So, I accepted and am now preparing in all haste for my departure for Serbia, which I expect will be next week Friday or a day or so earlier.

I have reason to assume that my new position will permit me to have greater facilities to work with success on the realization of your project, especially as Mr. Milovanovich knows of my connection with your project. It is therefore my belief that his offer can be looked at in the light of a "bon augure."

My address in Belgrade will be "Savitch, Press Bureau," which also will be good for letters.

I shall consider it as a principal duty to see to it that I am allowed to work honorably and honestly for the realization of your project which in my opinion is of as great an importance to the interest and future of the country as my service can be.

The political situation is still befogged and unclear and to my belief there is no statesman who could say if it will be peace or war. However, one thing seems certain which is the various nationalities in A-U appear to be in unsettled mood, dissatisfied, wishing Francis Ferdinand and his lackey B. Aerial to the devil.

Quelles sont vos nouvelles? My sister Radmilla and myself ask you to convey our regards to the Princess. On Saturday I shall call on the baker and see about the children's cakes; also I shall not forget the bank, where I shall leave my new address and ask that everything coming from you for me should be forwarded to me either through the National Bank of Serbia or any other bank if they so choose.

With sincere regards and best wishes for a happy new year.

Yours sincerely,

V. R. SAVITCH.

4.

MINISTERE DES AFFAIRES ETRANGERES

April 15/28, 1909.

Press-Bureau.

Mon Cher Prince:

I beg to acknowledge the receipt of your yesterday's cablegram, and in confirming the news contained in my telegram from April 12/25 I have the honor of here enclosing the copy of the letter I received from the Minister of Commerce.

Acting in conformity to your cablegram by which you asked me to make the proposition to Servian Government in your name I begged for the preliminary concession that your company may enjoy all rights and privileges equal to those enjoyed by Servian State and Government for the complete study of the river system of Morava. I suggested that your company will take obligation to finish all preliminary works and present to Serbian Government the definite plans and estimates of costs as well as a demand for a concession concerning construction, execution, administration and exploitation of the proposed waterway within five years from the day the concession would be granted by both the Serbian and Turkish governments.

All Servia is interested in your project and will be received as a great benefactor. Government is ready to do everything to facilitate your task. Nothing reasonable and just will be refused your Company. The leading men of our society assure me they will form a league if necessary to ensure success of your enterprise insofar as Servia is concerned.

* * * * *

Yours sincerely,

V. R. SAVITCH.

With 2 enclosures.

Translation.

a.

MINISTERE DES AFFAIRES ETRANGERES

Enclosure 1

Copy made: Belgrade, 16/29-April, 1909.

BELGRADE, March 2nd, 1909.

To His Excellency the Minister for Commerce:

In the name of those whom I represent, The American Engineering Company, I have the honor to submit, Your Excellency, their demand with the request that this Company shall have the exclusive right from now during the period of five years to undertake all the works concerning the study of the River Morava, its valley, its tributaries in total, that they may work out a detailed plan for regulation and canalization of the Morava in order to get a waterway navigable for boats of (1,000) One Thousand tons.

When and as Your Excellency accepts this demand in principle, I will lay before you another new demand in detail of the conditions asked by the concern I represent.

V. R. SAVITCH,
Chief of Department, Foreign Office.

Translation.

b.

Enclosure 2.

ROYAL SERBIAN MINISTRY FOR AGRICULTURE, INDUSTRY AND COMMERCE
DEPARTMENT OF WATERWORKS

H. Br. officially.

BELGRADE, 15/28th, April, 1909.

Sir:

On the basis of a report from the Department of Waterworks I accept in principle the petition you put before me in the name of the American Engineering Company, demanding the concession for the execution of preliminary works, for the construction of a navigable waterway Danube-Morava-Vardar-Aegean Sea.

In order that I may be able to undertake further steps it is necessary that the American Engineering Company should submit close and detailed statements of terms and conditions under which they would desire to obtain the concession to be granted to them for the execution of the preliminary works as well as for the construction of that navigable waterway.

Of this take note and make known to those whom it concerns.

THE MINISTER OF COMMERCE, INDUSTRY AND AGRICULTURE.

To J. M. PRODANOVICH.

Mr. VLADISLAV SAVICH,
Chief of Department,
Ministry of Foreign Affairs.

5.

NEW YORK, Tuesday, June 8, 1909.

My dear Mr. Atterbury:

The following are copies of my cable of Saturday last, June 5th, and the answer to it received today. My cablegram:

"Our written demand presented through you concerned entire concession stipulating Government participation in cost of entire construction in Serbia including preliminary works Company expects clearer statement if Government has accepted in principle those terms cable clearly and post certified copy Government answer."

The answer received today:

"Minister Commerce accepted your terms anyhow laid your proposition before Council Ministers letter follows."

You have in hand a copy of the general demand made in March, 1909, for concession, and you will find on page 3 reference to the Government participation in cost.

Yours very sincerely,

LAZAROVICH-HREBELIANOVICH.

Copies enclosures in letter of 8/VI, 1909, to Ch. L. Atterbury, 30 Broad Street, N. Y. City:

THE ANGLO-AMERICAN TELEGRAPH COMPANY

224 K 2 Belgrade 6

March 12 1909

Clatter N Y

Proposition made today Savitch
(MC 238P)

THE ANGLO-AMERICAN TELEGRAPH COMPANY

65 K Belgrade 9

April 24 1909

Clatter N Y

Officially informed Government accepted your proposition Savitch
(D 7.04 AM)

THE ANGLO-AMERICAN TELEGRAPH COMPANY

136 W 1 Belgrade 16

June 8 1909

Clatter N Y

Minister Commerce accepted your terms anyhow laid your proposition before Council Ministers Letter follows Savitch
(9.21 AM P)

STATEMENT OF EXPENSES.

American Engineering Company of New Jersey in Connection with Danube-Aegean Waterway Project.

To Professor N. I. Stamenkovich and his assistants as per contract for Reports, "General Project," etc., including traveling expenses (last payment Feb. 23, 1909); total.....		\$5,450
Representation in Serbia, V. R. Savich, salary, Aug., 1908, to Jan., 1910, including traveling expenses; total.....		1,950
Representation in Turkey, legal and other expenses in connection with project in London, England, and New York, U. S. A.; total		8,050
Total.....		<hr/> \$15,450

*Appended Letters:*a.
Corr.

F. B. C.

BROWN, SHIPLEY & Co.

West End Branch

Telegraphic Address "Shiphrah, London"

Telephone No. 4168 Gerrard

Head Office

Founders Court, Lothbury, E. C.

123 Pall Mall

London, S. W.

23rd February 1909

Prince LAZAROVICH-HREBELIANOVICH

c/o Messrs. Brown Brothers & Co.

59 Wall Street, NEW YORK, U. S. A.

Dear Sir:

In accordance with your telegram of the 19th instant we have duly paid the sum of Fcs. 5000.00 to Professor N. I. Stamenkovich, at Belgrade, and have this day charged your account with £199.12.0, cost of Francs 5000.00 and £1. Charges $\frac{1}{2}\%$, making a total of £200.12.0. We will debit you in due course with the cost of the various cables.

Yours faithfully,

p. p. BROWN, SHIPLEY & Co.

F. B. CLERK.

b.

BROWN BROTHERS & Co.

59 Wall Street

H. W.

CABLE DEPARTMENT

(K)

NEW YORK, March 18th, 1909.

Prince Lazarovich-Hrebelianovich,

New York City.

Dear Sir:

Referring to your letter of February 19th relative to payment of Fcs. 5,000 to Professor Stamenkovich, our London House, Messrs. Brown, Shipley & Co., 123 Pall Mall, have written us as follows:

"Referring to your cable of the 19th February, the payment to Professor Stamenkovich has been duly made and we enclose this gentleman's receipt herewith, which we understand you will hand on to Mr. Charles L. Atterbury, 30 Broad Street, New York.

"The charges have been duly debited to Prince Lazarovich's account and if he will kindly send us his Pass Book to be written up to date the entries will appear therein. At foot we give you details of the charges referred to above:

"Telegram from New York.....	1.16.0
"Telegram to Belgrade	9.4
"Fcs. 5,000 @ 25.05 plus $\frac{1}{2}\%$ comm.....	200.12.0
	<hr/>
	"202.17.4"

which we mention for your information. The above-mentioned receipt has been sent to Mr. Atterbury.

Very truly yours,

p. p. BROWN BROTHERS & Co.

CHAS. HOFFMAN.

III.

MISCELLANEOUS CORRESPONDENCE, REPRINTS AND EX-
TRACTS OF ARTICLES, BOOKS. ETC.

MISCELLANEOUS

I.

Extracts From the Book, "The Orient Question, To-day and To-morrow," by Lazarovich-Hrebelianovich, published 1913, Duffield & Co., New York.

(1) pp. 137-141:

In 1885-86 a campaign of propaganda in a political sense with the ultimate object of an insurrection in Turkey was begun by an organization called the "Central Committee for the Autonomy of Macedonia and Albania."⁷ The standard of that organization was "Macedonia for the Macedonians." Its object was to obtain the execution of Article XXIII of the Treaty of Berlin, separating the nationalities, Serb, Bulgar and Greek into homogeneous groups, forseeing their ultimate junction with their cultural centers, the neighboring States of Serbia, Montenegro, Bulgaria and Greece.⁸

The task before the committee was not only to rouse the people to remembrance of their rights as people, but to educate them in the principle of coöperation for the attainment of one supreme purpose—their liberation from the Turkish yoke. Efforts were made also to counteract sectional frictions and hostilities which had been engendered among them by national propaganda carried on by agents of the independent bordering States representing the races to which they belonged. The next task was to bring before the world knowledge of the conditions in Turkey, and of the fact that almost the entire population of European Turkey was non-Turk, and was in ferment, striving to win freedom.

To that end the Paris Macedonian Committee was founded in 1894,⁹

⁷ The author was one of its first members.

⁸ From the first the guiding idea of the author was that the organization might be used as means of freeing the Serb lands still under foreign sway, and so unify the Serb nation into one State out of a half dozen States and provinces, so as to accomplish what for centuries, had been the Serbian dream of bringing into one political entity and body politic the entire Serb nation, all of one race, one language, one cultural thought and expression throughout the entire Serb block of territory. A vital part of that design was to secure a Serbian outlet to the sea, without which, there can be no Serbian development. The ultimate aim was a State commanding a permanent and solid position among the nations of the world, able to progress unimpeded and perfect its civilization, according the full measure of its national genius. Such a result could only be hoped for in harmonizing the efforts, not only of the Serbs, but also of the Bulgars and the Greeks. It was the object of endeavor to inculcate in them all, the important fact that a Serbia on such lines is a *conditio sine qua non* of a greater and stronger Bulgaria and Greece; and that, for the same reason, a strong Bulgaria and a strong Greece would offer conditions most propitious for a strong and free Serbia.

⁹ The author went to Paris for the founding of the Macedonian Committee there, in September, 1894, and to England for the re-organization of the London Committee in 1901-02. Reference: British Parliamentary Report—Turkish Affairs,

the London Macedonian Committee was formed in 1896, and re-organized in 1902.¹⁰ The activities of the Committee are recorded and referred to in the British Parliamentary Reports, called "Blue Books."—Report of H. B. M., Foreign Secretary to Parliament, Turkish Affairs, 1903-04, pp. 307, 308, 309, corres. No. 378, inclosure No. 378. "Macedonian Committee to the Marquess of Lansdowne," September 4, 1903. Signed: Lazarovich.

(2) *pp. 143-145:*

The Macedonian agitation as may be understood was not calculated to mitigate the already chronic state of anarchy in Turkey; their aim was the overthrow of that régime. This speculation was justified by the principle that conquest, though it may usurp, cannot abolish the sovereignty of a nation, which remains in abeyance only so long as the militant forces of the conqueror are strong enough to prevent its re-assertion, that to resist conquest is the duty and the right of a nation and of the individuals composing that nation; that the action to weaken and destroy the forces of the conqueror and throw off his yoke is not only the duty of a nation, but is also the proof of the honesty of its ethical, cultural and spiritual morality and of the honesty and character of the individuals composing the nation. Those principles are basic and upon them were founded the agitation and movement to overthrow the Turk. As a Serb, the author had first in view the recall from abeyance of the Serbian sovereignty and the unification of the Serb race, but the plans of his committees included the securing of the same results for the other Balkan peoples, the Greeks, the Bulgars, and the Albanians. With the accomplishments of those several unifications the European part of the Near Eastern Question and a part of another European problem will have been solved. It should be said once and for all and clearly understood that the unhampered possession of the entire Balkan Peninsula by the Balkan peoples solely and their control of those lands, free from outside interference, presents conditions necessary not only to the comfort and progress of those peoples,

1902-03, p. 177, inclosure No. 213: "Reports on Events in Macedonia during May, 1902." . . . the organ of Michailov's Committee ("Reformi," Sophia, Bulgaria) reports that Evgenyi Lazarovich, who six or seven years ago founded the Paris Macedonian Committee is trying to form a similar one in London to prevent English foreign policy from being influenced by the Phil-hellenism of the Byron Society." . . .

At the time when every effort had been exerted to plant the conception of harmonious coöperation among the several national sections in Macedonia it was necessary to combat certain political groups in foreign lands who, in spite of the irrevocable policy of their governments, of Turkish maintenance in Europe, made it their work to incite unrealizable ambitions in some one section, which became untractable, under the delusion that such or such a foreign State would enforce a demand by that particular national group for the whole of European Turkey.

¹⁰ The London Macedonian Committee had no connection whatever with the so-called "Balkan Committee," composed of several young Englishmen, whose aim and purposes were entirely concerned with English politics. They formed their Committee in London in 1903 after the outbreak of the Insurrection.

but to the peace of Europe, so far as regards all issues affected by that region of the world.

(3) *pp. 147:*

A rising was first planned for the autumn of 1902, for which most of the organizations came together to discuss a scheme of concerted action.¹¹

(4) *pp. 149:*

The insurrection, which broke out in August (1903) was a large and well supported movement. . . . By the middle of October the Turkish troops got the upper hand; the expected intervention of Serbia, Bulgaria, and Montenegro did not materialize; the change of ruler in Serbia¹² had some influence in that matter, as King Peter and his Government were occupied with the interior affairs of the country, and the pressure exercised by the great Powers imposed restraint. The different organizations attempted to negotiate with the Turkish Government to obtain some acceptance of their demands.

(5) *pp. 152:*

After having been able to prevent an attempted rising that had been financed by private British and Austrian sources in 1904, and which

¹¹ In that connection a series of meetings, attended by Sarafoff and other leaders, who came especially to England for that purpose, took place at the author's country house in England in June, 1902.

¹² An exchange of letters between Lazarovich-Hrebelianovich, Delegate of the Macedonian Revolutionary Committee in London, and the Serb Minister Plenipotentiary in London, Mr. Militchevich, during spring and summer, 1902, shows that Serbian diplomatic and eventual military intervention in favor of the insurgents in the projected insurrection in Macedonia were contemplated. King Alexander (Obrenovich) is said to have personally favored such intervention and to have initiated toward that end negotiations with the other Balkan States.

It may well be mentioned that this correspondence also contains letters:

(a) Dated during summer, 1902, which cover the sudden failure of the French Underwriting Syndicate to list, as per contract, the Serbian bonds (debt) at the Paris Stock Exchange. This caused a grave financial situation in Serbia, crippling the treasury so that for several months no funds were available for the pay of the army officers and other Government employees.

(b) Letters dated October, 1902, which deal with information concerning the forming of a conspiracy in Belgrade to assassinate King Alexander (Obrenovich) and the purported transmission through American channels to Belgrade of foreign funds, said to be Austrian, to finance that conspiracy.

Concerning the Belgrade assassinations of 1903, the following may be of interest: Citation from a full-page article signed Lazarovich-Hrebelianovich, New York "Sun," Sunday, August 2, 1914:

" . . . Count Goluchowski, the Austrian Foreign Minister, said to a Serbian ex-minister of State, one who afterward had intimate knowledge of the inner workings of the tragic events of 1903: 'You Serbians are dissatisfied with Alexander; Austria has ceased to trust him. It is a matter of indifference to us what you do with your King; Austria exacts only that his successor shall not be a Montenegrin or a Russian.' . . ."

The above citation is a free translation of a passage in a letter written by a Serbian ex-Cabinet Minister in January, 1902, a week or so after the interview referred to had taken place. The cause of that Austrian distrust towards King Alexander was, according to that letter, Alexander's attempts, under Queen Draga's "evil" influence, to free himself from the secret treaty his father had made with Austria.

would not have furthered Macedonian or Balkan interests, the Central Macedonian Committee adopted a waiting attitude.¹⁸

Memoranda:

2.

a. Macedonian Committee to His Britannic Majesty's Secretary of State for Foreign Affairs:

Re: No. 27630.

November, 1903.

Your Excellency: I have the honor to submit the following suggestions. . . .

The origin of the strife and miseries of the Christian population in European Turkey (Macedonia) can be found in—

(1) The Agrarian and Taxation Question.

(2) The issues and complications involved in the Question of Supreme Ecclesiastical Authority. Autonomous Church Government is identified with Nationality in the minds of the Orthodox Christian populations throughout the Balkan States.

(1) The solution of Agrarian and Taxation question could be based upon a plan reverting to the original system in existence before 1829, by which the Headmen of the villages or Elders of families collected all taxes and remitted them to the proper authority.

The rate of taxation in those times was generally estimated and fixed by common accord for a number of years in advance. The same system was also applied in the relations of landlord and tenant, could be reverted to and made general. That would prevent the authorities and landlords from coming into direct contact with the people, and thereby remove the oppression and abuses at present connected with tax collection. A reversion to that old system would be, as it proved before, entirely to the interests of the Imperial Ottoman treasury.

(2) In regard to the question of Autonomous Church Administration:

There is in creed, dogma and canonical law no difference between the Patriarchat or Greek Church and the Exarch or Bulgarian Church. The separation refers only to autonomy of administration.

The excommunication of the Bulgarian Exarch was pronounced on account of administrative disobedience, and the strife, comparable to a fight between two Bishops of the same Church for a parish in the same diocese.

At the time of the erection of the Exarchat only a part of the Slavonic populations of those districts today forming the disturbed localities

¹⁸ The author retired at that period (1904) from active participation in the direction of that organization with which he had been identified since 1886, in order to devote himself entirely to a work involving Serbian development southward, including the securing of an outlet on the Aegean Sea, and the construction across Serbia and Old Serbia (Turkey) through the rivers Morava and Vardar of a navigable waterway called the "Danube-Aegean Waterway."

in Macedonia, came forward to recognize the Bulgarian Exarch as their religious head and claimed to be part of the new "milet" or "nation" of the Exarch.

The strife in those districts is the fight between Greek Patriarch and Bulgarian Exarch for the extension of their respective dioceses; national conscience enters into that contest only in so far as Patriarch and Exarch represent rival national propaganda.

It is believed that the following measures would put an end to these strifes, and make pacification of the country possible.

Bulgaria (Bulgaria proper and Eastern Rumelia) to be declared independent and erected into a Kingdom.

That measure would automatically cause the Archbishopric of Bulgaria (today suffragan of the Exarch, and identified with the limits of the State of Bulgaria) to become an autonomous administrative autocephalous Church.

When, in 1870, the Exarchat was erected it was in fact the reërection of the old Bulgarian Patriarchat of Tirnovo (in Bulgaria proper) that had been suppressed by the Phanar about 180 years ago; but for political reasons the title "Exarch" was adopted and Constantinople taken as See, instead of the title "Patriarch of Tirnovo," with See at Tirnovo in Bulgaria proper.

Entirely independent from the Bulgarian autonomous church thus limited to the Bulgarian Kingdom, there would remain in Constantinople an autonomous Bulgarian Metropolitan with jurisdiction limited within the Turkish borders.

This creation of an independent and autonomous Church administration within Turkey would remove the "legal pretext of Bulgarian national propaganda," which is the cause today of so much bitter strife and violence in Macedonia.

This accomplished, the second measure should be: To divide European Turkey (Albania excluded) into four Autonomous, Autocephalous, Metropolitan Dioceses:

A. The land north of the border of the Kingdom of Greece and south of a line straight from east to west, beginning at the River Bistritza, Gulf of Salonika, population Greek, to be under the sole religious administration of the Patriarch of Constantinople, who would be the Metropolitan of that diocese.

B. The land east of the River Struma, bounded on the south by the shores of the Aegean Sea, on the east by the shores of the Black Sea, and on the north by the southern Bulgarian border, two autocephalous dioceses to be respectively under the Patriarch and under the autonomous Bulgarian Metropolitan (to be substituted at Constantinople in place of the Exarch).

The parishes in this district are so well defined that there is, and could be, no collision between the authority of the Patriarch and that of the Bulgarian Metropolitan—or Exarch.

C. The land today known as the Vilayet of Kossovo, the Sandjak of Novi-Bazar, and some districts of the Vilayet of Monastir, to be under a new Metropolitan, as an autonomous autocephalous church district, a Serb Metropolitan—the reërection of the old Serb Metropolis or Patriarchat of Ipek, suppressed about 150 years ago—with the See at Skoplya or Ipek.

D. The remaining land (Macedonia proper) to be made an autocephalous diocese under a new Metropolitan—the reërection of the old Metropolis of Ochrida, suppressed 150 years ago.

This new organization of church administration throughout Macedonia, would as a matter of fact and automatically make, according to the practice in Turkey, the respective Metropolitans the heads, both religious and lay, of the Christians in their districts. All church dependencies, such as schools, etc., would follow the new distributions.

In the constitution of the Turkish State, the Christians form “nations” or “milet” under the religious and lay authority of the head of their autonomous autocephalous churches. The *status personæ* and all questions arising therefrom are judged by the courts of their churches. All that concerns the *status realis* goes before the Turkish authorities, as do all questions of public order.

The many judicial reforms imposed by Europe, by ignoring the bearing of this situation, have often brought only confusion and disorder into these matters, and therefore have failed.

There would be only two new autocephalous churches or church districts to be created, or, better said to be reërected, namely: the Sees of Ochrida, dating originally from the ninth century, and the See of Ipek (originally dating from the thirteenth century as autocephal).

These creations or re-creations would be in keeping with the practice of the Orthodox Church. The Patriarch of Constantinople should recognize these newly created autocephal church bodies, and delegate to them all the ecclesiastical and lay power received by him through privileges dating from Sultan Mohammed in 1453 at the fall of Constantinople, and all the lay power acquired by him in absorbing those two former autocephal churches, as well as all other privileges granted to those churches by various Sultans and afterward absorbed by him. The Patriarch could relinquish those powers, as precedents have shown, against yearly monetary payments, or tribute.

To each of these autonomous Metropolitans, a European Commissioner should be attached, who would be the natural spokesman and representative of the Orthodox native Christians before all Turkish authority; and such a representative would have weight.

These proposed reforms and measures would do away with much of the evil prevailing in those lands, and it is believed with some confidence, that normal peaceful conditions would ensue.

It is thought that H. I. M. the Sultan could grant such measures.

. . . .

I am, Sir,

Yours, etc., etc.,

LAZAROVICH, Delegate.

b. Memorandum submitted in the spring of 1904, through the good offices of Sir Henry Drummond Wolff, Privy Councillor, Ambassador, etc., to H. R. & I. M. King Edward, and the British Government, and subsequently to the German Government:

. . . . The proposal submitted is: To create a Federation of the Balkan States with Serbia as basis.

Such a federation could only be formed with the support of at least one or two of the Great Powers, whose interest would thereby be served.

The maintenance of the Ottoman Empire in Europe has hitherto been an unavoidable part of British policy; there has been no other bulwark against northern aggression.

Political events, however, of the past few years, and the steadily growing sense of a community of interests and an increasing tendency towards national unity among the races of the Balkans, has developed a new situation and made evident the possibility of forming those people into a new state strong enough to resist outside interference and to be substituted for the Ottoman rule in Europe.

The existence of such a state would do away forever with the necessity of upholding Turkish supremacy in the Near East.

The practical accomplishment of this plan involves the settlement of the Macedonian question, and the unification of the Serbian race into one state, as well as the unification of the Greek and Bulgarian races into their respective states.

The *unification of the Serbian race* would demand the gradual union with Serbia of the Vilayet of Kossovo (old Serbia), districts in the northern part of the Vilayet of Monastir, the Sandjak of Novi-Bazar, Bosnia-Herzegovina, the Principality of Montenegro with extended border up to the River Drin, etc., etc.

The *unification of the Bulgarian race* would call for the annexation by Bulgaria of the Vilayet of Adrianople, and the eastern part of the Vilayet of Salonika.

The *unification of the Greek race* would necessitate the annexation by Greece of the southern part of the Vilayets of Monastir and Yanina, parts of Salonika, the Island of Creta, and all the other islands and Greek coast of Asia Minor.

From the remainder of the Turkish European possessions should be created two states, namely:

1st. Albania, including part of the Vilayet of Scutari south of the River Drin, the northern part of the Vilayet of Yanina, and a district of the Vilayet of Monastir.

2nd. Macedonia, including the greater part of the Vilayet of Salonika, and the greater part of the Vilayet of Monastir.

The first steps towards the federation of these peoples would be a settlement of the Macedonian question, providing for the ultimate separation of the different districts and provinces according to the allotment above suggested: that fixing of the borders of the new provinces in European Turkey would remove all cause of misunderstanding and friction which might otherwise be provoked by the rival aspirations of the surrounding states and impose upon them the recognition of the necessity for the creation of the autonomous States of Macedonia and Albania.

. . . . A scheme of settlement was proposed in November last (1903) inviting H. I. M. the Sultan to, himself, grant a reasonable measure of self-government to the Christians of European Turkey. Enclosed is a copy of the outline of the project in the form in which it was accepted by H. E. the Turkish Ambassador in London for transmission to H. I. M. the Sultan, after unofficial discussion of its terms.

The project submitted was entirely workable and fair to Christians and Moslems alike. Its main points were: That H. I. M. the Sultan should of his own free will grant a statute for the government of his Christian subjects in European Turkey by Christians, making them responsible for their own administration and control, they still to remain under direct authority of H. I. M. the Sultan.

There should be created five provinces according to nationalities:

Macedonia—Including part of the Vilayet of Monastir and part of the Vilayet of Salonika (Macedo-Slovenes).

Albania—Part of the Vilayet of Scutari, part of the Vilayet of Yanina and a district of the Vilayet of Monastir (Albanians).

Thessaly-Epirus—Southern parts of the Vilayets of Monastir, Yanina and Salonika (Greeks).

Old Serbia—The Vilayet of Kossove, Sandjak of Novi-Bazar and part of the Vilayet of Monastir, and a district of Scutari (Serbians).

Adrianople—The Vilayet of Adrianople and the eastern part of the Vilayet of Salonika (Bulgarians).

^{13a} It may be opportune to draw attention to the following: Among the papers found in the Archives of the Imperial Russian Foreign Office, and published some time ago, was said to be a correspondence purporting to show: that Germany, in about 1904-5, came to the conclusion that a break-up of Austria-Hungary was unavoidable and approached Russia to learn the latter's attitude in the eventuality of the Dual-Monarchy's dissolution; that Germany proposed to follow a policy of strict disinterested neutrality provided Russia should adopt a similar course. The Russian answer seems to have been: Russia before replying would have to consult France.

These provinces should be subdivided into districts, Christian districts and Moslem districts, each district to be respectively under sole Christian or Moslem control and administration, according as the predominating population numerically should be Christian or Moslem.

For the preservation of public order, a military police should be recruited each in its own district, and be under the authority of the Governor of that district. The organization, drilling and command of this force should be, during the first few years entrusted to European officers.

For the administration of justice in the Christian districts, Christian courts should be instituted.

In order that these reforms should be applied without delay, it would be necessary that the Sultan should issue a Hatti-Shereef containing provisions for their immediate execution, making unnecessary any further orders or supplementary provisions from the Sultan for the accomplishment of the programme.

For that reason the Hatti-Shereef should contain:

(1) The creation of the provinces fixing the demarcation of their borders.

(2) The subdivision of each province, into Christian and Moslem districts, with provisional delimitations of their borders.

(3) The necessary and detailed provisions for the creation of the new administrations in the Christian districts: Justice, Finance, Political Administration, Cult and Education, Agriculture and Commerce, and all other branches of administration requisite to a self-governing body.

(4) The appointment of the Christian Governors, with full investment of authority.

(5) Provision for the immediate creation of all local representative bodies.

(6) Provision for the immediate creation of a military police corps, its recruitment, formation and instruction, and the nomination of its officers.

(7) The necessary orders for the evacuation by the Turkish troops of the Christian districts.

(8) The naming of a mixed commission which should be composed of an equal number of Christians and Moslems, to visit each province to rectify the borders between the Christian and Mohammedan districts according to the reclamations of the inhabitants. The commission should be assisted locally in each province by a fixed number of Christian and Mohammedan notable elected from and by the inhabitants of the district.

(9) The Hatti-Shereef should become law and enter force on the day of its proclamation.

The Powers should be asked to appoint a commission to supervise the execution of the Hatti-Shereef.

In order to provide for the initial expense of the new Christian administration it would be necessary to raise a loan.

To this scheme is added a suggested settlement of the religious troubles in these provinces. It is proposed that the Serbian Church should be made autocephalous in Turkey and that an Autonomous Archbishopric should be created in Macedonia.

Recent events have indicated that it would be impossible to obtain at once a grant from the Ottoman Government, containing so full and complete a programme, especially as it would meet with hostility from Russia, France, Austria and Italy. France can never be otherwise concerned as regards the Balkans than in putting another Power in the Mediterranean to counterbalance British influence in those waters. One of the foremost Frenchmen of the day said recently: "France can never have any other policy in the Near East than to see Russia preponderant; Russia in Constantinople would be all to the advantage of France and would be the only safe balance to growing British pretensions in the Mediterranean."

The Ottoman Government has not the foresight to see that complete measures of reform would prolong its rule in Europe, and the chances of obtaining anything like an adequate degree of self-government as a grant, become more and more remote.

For that reason other methods of securing the desired control must be adopted. The best hope of success lies in attacking first the most vulnerable point of the Turkish system, its financial weakness.

Some need of the Turkish Government must be satisfied in return for the means of obtaining a beginning of relief for the populations.

The most vexatious and the most ruinous of all the abuses by which the populations of European Turkey are oppressed is the system of the tax collection. The taxes themselves are not exorbitant at the rate officially announced, but the abuses arising from the method in which they are collected is one of the chief causes of desperation among the people.

At the present time the Turkish Exchequer is in pressing need of funds.

All Turkish resources now available have been already pledged to meet the services of the actual Ottoman debt, and the finding of a new resource capable of meeting a new loan would be apt to attract favorable attention in Constantinople, and would probably remove the difficulties which hitherto have obstructed all proposals of reform bearing upon tax-collecting or financial administration.

Those difficulties are the same today as they were before the Turco-Russian War. During the conference at Constantinople, the same difficulties lay at the base of the obstruction to the execution of the plan of reform prepared for European Turkey by the Congress of Berlin. The

difficulty has always been that the tax collecting yields to a large class of Turkish officials rich revenues and has formed the source of many of the fortunes of the rich Pashas.

David Urquhart, in 1833, declared that the autonomy of the local administration is absolutely necessary to the well being of the Turkish population. Urquhart found that all reforms left to be applied by Turkish officials were only used by them as means of enriching themselves at the expense of the people.

On the occasion of the Constantinople conference, the Porte rejected the European reform scheme, repulsing especially that section concerning finance, and a Turkish personage offered the following explanation: "How can we accord a system of administration which would have the effect of reducing to misery about 30,000 of us? How would we live and what would become of us?" This speech is recorded in an official report. It embodies, no less now than it did then, the main difficulty in the way of the application of all schemes of reform for European Turkey.

That obstruction could only be removed by either wiping out completely the Turkish rule in Europe, or by profiting by the financial distress of the Ottoman Government.

To create a new resource making it possible to raise a new loan for the Turkish Government, would, according to the means I suggest, open up to the Turkish Government the prospect of raising other loans upon the same resources, at a later period, and be a further inducement to the Ottoman Government to accept the terms proposed.

The honest and efficient farming of the tithes could be made to furnish the desired resource; also, the control of the tithe-farming would be a means in hand of at once relieving the people from the abuses and burdens of the present corrupt administration.

That control would lead to more extended measure of improvement in the agricultural and economic conditions, and would by degrees permit the development and gradual accomplishment of the original programme of self-government for, at least, the Christian populations of these lands.

The object of the present project is:

To find guarantees for a loan¹⁴ to be made to Turkey, with the aim

¹⁴ Appended to the scheme of settlement suggested to the Turkish Government in November, 1903, was the offer of a loan. A promise of underwriting such a loan to Turkey up to the sum of five million pound sterling had been obtained from Sir Ernest Cassel and his group. For use in the dealings with the Turkish Government a letter containing that underwriting promise was given to Lazarovich-Hrebelianovich by Sir Frank Crisp, of the London law firm (solicitors) Ashhurst, Morris and Crisp, who was Sir Ernest's legal representative in that matter. A letter from the head of a German banking group (Herr von Gewinner of the Deutsche Bank) addressed not to Lazarovich, but to an English friend of his, Sir Henry Drummond Wolff, P. C., etc., a statesman of renown, interested in Lazarovich's ideas for the Near East, expresses willingness to underwrite the proposed loan to Turkey up to ten million pound sterling. That letter contains also some allusions to the Persian oil fields and the Bagdad railway in the negotiations between German and British interests, in which Sir Henry Drummond Wolff was then concerned.

of inducing the Turkish Government to hand over to a syndicate the reorganization of the present system of collecting the direct taxes in European Turkey. . . .

. . . . The object of this scheme is to relieve the people from the abuses of the present system as practiced by the Turkish Administration, and it is intended to be the first step towards the practical solution of the Near Eastern question.

Statistics show that such a loan could be raised, and tax collection managed in such a way as to guarantee its service, relieve the oppression, pay the usual returns to the Imperial Treasury, pay costs of collection service, pay the service of the loan and leave a surplus for the improvement of the agricultural and commercial conditions of the country.

The direct taxes of the Turkish Empire include:

(1) A ground and house tax (Verghi), excluding Constantinople	£T. 2,236,092
(2) Income tax	500,000
(3) Tithes	4,689,000
(4) Sheep, camels, and oxen.....	1,937,849
(5) Hogs	16,000

Total direct taxation..... £T. 9,568,941

With the exception of the military tax, borne solely by the Christians, and the stamp duties, both not included in this calculation, the direct taxation rates at 40.21 piasters per head, of which 20.5 piasters are produced by the tithes.

The population of European Turkey (excluding Constantinople, which has a special system of taxation) is 4,950,300 persons, which, at the rate of 40.21 piasters per head, gives a yearly return of T. 1,014,811.5 (these figures exclude the military tax and the stamp duties).

The financial administration is organized according to Vilayets, each Vilayet having its budget and autonomous administration.

The Verghi, the income tax and the tax on cattle and hogs are paid directly to the Imperial Treasury through a tax-collector, who is the agent of the treasury.

The tithes are auctioned off in advance of the harvest to persons who in turn re-sell their contracts to other sub-contractors.

The 20.5 piasters per head is reckoned upon the sum which the Government receives and not upon the sum paid by the taxpayer to the collectors.

The present system involves the employment of a number of middlemen or exploiters, and their gains and costs of collection.

The tithe rate in Turkey is 12.1 per cent. of the value of the harvest, which is estimated immediately before gathering by the tax collectors,

and the estimate, depending upon his discretion and good will, varies accordingly.

During the Turkish rule in Bosnia, the Consular statistics showed that though the tithes were officially set at one-tenth or 10 per cent., the taxpayer was forced to give the collector one-eighth and often one-seventh, or from $12\frac{1}{2}$ per cent. to 14.28 per cent. The auction price paid by the collector for the contract represented generally only 8 per cent. and sometimes 9 per cent., but never more.

At present the direct taxes bring in about 8.85 Frs. (40.21 piasters) per head. Of this the tithes are represented by 20.5 piasters, or 4.715 Frs.; the other direct taxes by 4.135 Frs.

In Bulgaria, where the agricultural conditions are similar and the same taxes exist (tithes having been replaced by a ground rent tax of 10 per cent. of the harvest, paid in kind or in specie), and where the abuses of collection have been suppressed, the State received 10.40 Frs. direct taxes, which is 1.55 Frs. more than that received by Turkey, although the rate of taxation is less in Bulgaria (tithes). The Bulgarian rate is 10 per cent., the Turkish tithes 12.1 per cent. Estimated on the basis of 1.55 difference, which is the lowest possible, the surplus which never reaches the Imperial Treasury is £287,000 (sterling). That surplus would guarantee the service of a loan of £5,000,000, which would demand £250,000 yearly. The rest would more than cover the expenses of the administration, collection of taxes, etc.

If the Bulgarian 10.40 Frs. is considered as a 10 per cent. levy, the 8.85 Frs. (Macedonian) would represent a levy of 8.5 per cent.

The tithes (Macedonian) if properly and honestly administered with the present levy of 12.1 per cent. would give 6.94 Frs., instead of the present yield of 4.71 Frs. The surplus in that case would be £647,598, an amount which probably represents more nearly the amount at present paid by the taxpayer in excess of what the treasury receives. This reckoning is made on the supposition that the tax collector is honest, brings no undue pressure to bear upon the peasant and levies only the legal amount (12.1 per cent.)

I would suggest, as a system of tax collecting, the reversion to a method which was for a short period in past times tried with success, namely, that the headmen of the villages were allowed to collect and hand over the taxes directly to the Imperial Treasury. . . . As an example of the relative values of the method at present employed and that above referred to, in the district of Argyro-Castro in European Turkey, the Verghi immobilier and the tithes brought under the method at present prevailing 11,000 piasters. But when for a short period these taxes were collected by the headmen of the village and paid directly by him into the treasury, the return was 46,000 piasters.

The system of personal collection of the taxes by the people them-

selves, corresponds to the wishes of the populations and has been made the subject of frequent petitions to the Imperial Government. Those petitions have not been granted because the farming of taxes has been a source of personal enrichment to the officials.

As the different nationalities in European Turkey are correctly represented by the formation suggested of new provinces, each having to a certain extent its own more or less special economic customs, it would be easy the shape the provinces on a national basis.

I am, etc.,

Your etc., etc.,

LAZAROVICH.

3.

An open letter in the Serb language, of which the following is an English translation, was published in the second week of March, 1912, in Belgrade, in the leading Serb newspapers, including the "Tribuna":

Today when strange rumors of Serbian downfall are printed in the daily press throughout the world, and when Serbia must again either prove her right to exist as an independent State and her strength, both moral and material, to enforce that right, or else be overwhelmed, I trust that as a simple Serb I may without apology submit for your consideration thoughts which must be uppermost in the minds of all Serbs wherever Serbs are. The fact that these rumors are without doubt inspired by those who would wish them to be true makes them none the less worthy of attention.

In 1908 prior to the seizure of Bosnia, the late King Edward VII of England, sent the following message through a high official who still holds his post at the British Court: "Tell Lazarovich that Europe is not going to permit the Serbs to make their Unification," to which the answer was: "It is God who permits. It is not by the will of Europe that Italian unity was made, nor by Europe's permission that the Germans created their unification in 1866 and 1871."

We forget too easily the international importance of Serbia and the reasons of that importance.

We must remember that the present fierce competition among European powers for trade and political supremacy in the Orient has intensified the Near Eastern Problem in all its complexity. This problem involves the possession and control of that part of the world which, by its command of the land routes and the waterway via Suez eastward, including those points where the most direct communications between East and West can be interrupted, forms the strategic key to the Orient and Southern Asia.

The main strategic point of the Near East commanding the whole Balkan Peninsula lies in Serbia.

There also at Nish cross the two great longitudinal valleys forming the shortest and most direct roadway between Europe and the Orient.

From Nish these two roads lead one eastward to Constantinople and Asia, the other southward to Salonika and Suez.

That supreme strategic position places the Serbian States and the Serbian people in the front rank of significance in regard to the Near Eastern Problem. In fact the very kernel of the Near Eastern Question is an international contest for the possession of the Serbian plateau as well as of Suez and Constantinople.

God has given to us Serbs this dominant strategic position in the Balkan Peninsula and made us the keeper of this great gateway between Europe and the Orient. Peril is bound up with this trust, which focuses upon Serbia the desire of other nations, but this sacred trusteeship holds also the potentiality of national greatness.

To guard the way from the Danube to the Aegean Sea is the Serbian mission.

The line of natural gravity for Serbian development is towards the south by the Vardar Valley through the old Serb lands to the Aegean Sea with Salonika as Serbian port. Along this direction lies the only possible trend of constructive policy insuring an enduring and powerful Serb State.

We have to remember that this policy formed the basis of the work of Nemanya culminating in the Serbian Empire under Dushan.

The revolt of Vukashin alone made possible a battle of Kossovo.

The defeat of Kossovo and death of Lazar wrecked and dashed to earth all that the Nemanyas and Serb people had built up during the centuries and annihilated Serb unity and all constructive Serb policy from that day to this.

The present site of the Serbian capital on the northernmost border looking north is a symbol of all that has been wrong and mistaken in Serbian policy since the days of Kossovo.

In that direction lies Serbian annihilation.

Either Serbia must turn and go frankly and squarely along her true old road southward building up anew the fallen walls of her past greatness or she must inevitably become absorbed by her stronger neighbors and sink into oblivion.

In this connection I venture to recall a project which I framed many years ago for the construction of a waterway from the Danube to the Aegean Sea, and whose realization will some day contribute an economic measure of first importance not only to the accomplishment of Serbian destiny, aiding the development of her productive resources, but it is self-evident that this waterway which will complete the extensive canal and river systems of Central Europe, shortening the way from the North Seas to Suez by 3,000 kilometers, will be of vast international benefit, making it therefore a sound and practical proposition.

In the interest of this project I laid before the Royal Serbian Gov-

ernment in 1909, plans and estimates which I had caused to be prepared by the most eminent Serbian engineer for the regularization and canalization of the Morava and Vardar rivers and a canal connecting them across Preshevo watershed, so to form a continuous waterway from the mouth of the Morava and the Danube in Serbia to Salonika, which would thereby become the most important commercial port in the Eastern Mediterranean.

In such times as these, Serbs need to remember the three precious gifts of inheritance which our fathers have left us:

Our Holy Orthodox Faith, so sublime and so simple that an English political writer has written of it: "In view of the present conditions caused by commercialism in Western countries which make the few rich richer and the many poor poorer still, the despairing poor of all Anglo-Saxondom might see in the Holy Orthodox Church an aspect of Christianity new to them and one they might accept"; and "that a wave of religious revival such as the world has several times seen might roll over the West and, at the right psychological moment, unite all within the Holy Orthodox Creed.

Our second legacy from our fathers is the glory of their achievements in wars of self-defence.

The third gift they have bequeathed to us is their wisdom embodied in the Serb social institutions formulating the principles of human brotherhood and individual rights, and high ideals of pure and noble womanhood. Thanks to those fundamental institutions Serbia, alone, of all Western countries is spared the sad sight of thousands of men, women and children working under the condition of slaves in the mines and factories with half-empty stomachs or else dying of hunger in the streets, such as is seen not only in neighboring lands, but in France, in England, and in America.

The inheritance of the Serbs of these great institutional blessings which have been developed among our people through the ages and are always seeking more and more perfect formulation, gives to Serbs a right to be proud and justifies our undying faith in the future of our country and our race.

Much has been urged on the subject of allies, but our people have to consider that they can never successfully ask until they have something substantial to offer in return. We all know that no nation can be strong unless it is united in spirit and determination to win, and that nation which works together as one man, combining its energies for the accomplishment of a sound constructive policy, is bound to win, and will have no need to seek allies, because other nations will soon perceive its value and seek its alliance.

Serbia's best ally has always been Serbia.

The conquering might of a nation as of an army is not in mere numbers, not in big battalions, nor yet in the sole mechanical superiority

of the armament, but that which makes an army or a nation irresistible is the spirit of the man behind the gun and the spirit of the nation back of that man. As it was said of Napoleon that his presence in battle was worth an army corps, so let us remember that the power of the true Serb spirit was proved when Milenko Stoykovich and his 2,000 men defeated Hafiz Pasha and his 40,000 at the battle of Ivankovatz, making every Serb literally worth 20 Turks.

The sure stronghold of Serbian defence is the soul of every Serb man and woman who understands the value among nations of the Serb race, and who thrills to the necessity of a united determination to build up from within a national strength grounded on the foundations laid by our fathers, embodying the Christian principle of brotherly love which has been the germ ideal of our institutions for centuries—a glorious State representing the creation of purely Serb genius.

I would that every one in the land could be able to compare the Serb social institutions, ideals and achievements with those of other nations. I think then all might, irrespective of political party, join hands with all those patriotic brothers whose hearts are in this consecrated work of giving to Serbia the proud place in the world which is hers by right.

February 26, 1912.

LAZAROVICH-HREBELIANOVICH.

4.

Translation of editorial in Croat newspaper, "Novi Hrvat" (published in New York, 104 Washington Street), of Tuesday, March 9, 1915. Paper distributed, in Chicago, at the opening of the First Yugoslav Convention, organized by Dr. Pototchniak, and Mr. Smodlaka, delegates from Croatia:

GREAT JUGOSLAVIA.

I do not think it necessary to say to Croats, Serbs and Slovenes, that they belong to a single racial entity. This is evident in their common ethnographical type, their speech, their ideals, especially those of brotherhood, of individual responsibility and independence, and their social institutions peculiar to themselves embodying those ideals.

If the Germans, the Magyars and the Turks had not during centuries in their unceasing attempts to subjugate and hold down our people, prevented the normal development of our civilization, we would already, since hundreds of years have been one great united State. During those same centuries the British people, the French, and the Spanish were by degrees welding their many small kingdoms and principalities respectively into a unified Great Britain, a unified France, a unified Spain. The latest of these unifications—Germany and Italy—had to shake off the same Hapsburg yoke which has held us down and kept us weak and divided. Each of these great nations had in its own way the same problem to confront as the one we have to solve today.

Each of these countries were split into various sections by mutual jealousies and suspicions which kept them separate. By the same methods, during hundreds of years, the Germans and Magyars have encouraged and enflamed all such sectional rivalries, and even differences of religious formulations among Southern Slavs in order to perpetuate their rule over our people by separating them into groups made powerless by continual strife with each other.

But at last the day and the hour have come when we Southern Slavs—Croats, Serbs, Slovenes—must be free and strong, able to develop a civilization expressing our own ideals and creating prosperous and happy economical conditions.

It is clear that the Southern Slavs must now take their place in the world as a great power.

The vital question is to find at this moment the most practical and the happiest system of bringing the several sections of our people into a national combination.

The fundamental basis of such a national formulation must be the recognition of the right of the individual existence and free development of each local group within the frame of the whole. Each of the old banners so dear to its followers through the ages must be respected. There must be a Slovenia, comprising all the Slovenes; there must be a greater Croatia; there must be a greater Montenegro; and there must be a Serbia, not robbed of one inch of the old Serb territory in Macedonia, purchased so dearly by the blood of her sons, the possession by Serbia of that Vardar River and its region being vital and essential to the very existence, not only of the Serbian Kingdom, but of all southern Slav freedom.

Therefore, our great Yougo-Slavia must be formed of the four brothers, with equal rights and equal responsibilities, each equally free, independent; and all, equally bound in all general interests affecting military, economic and foreign affairs.

Much is being said of the difficulty of settling the dynastic question, but that is a purely local consideration and can be left to the will of the people of each of the States in partnership.

Serbia is a Kingdom, Montenegro is a Kingdom, but there is no reason why new and greater Croatia should not be a free Republic, if the will of the people so decide, and there is no reason why the great Yougo-Slav Federation should not include a free Republic of Slovenia.

These, and all other such questions can be solved to the satisfaction of each regional group in the South Slav block if we remember that we are One Family, of One blood, One tongue, One ideal—and One enemy.

We have only to deal as brothers possessing equal rights and equal responsibilities.

LAZAROVICH-HREBELIANOVICH.

New York, March 6th, 1915.

5.

Resolution adopted on February 16, 1919, by a mass-meeting of Serbs, Croats, and Slovenes, in New York City. Submitted to President Wilson, who acknowledged receipt in a personal letter addressed to the Secretary of the Committee that organized that meeting:

The *Serbs, Croats, and Slovenes* of New York, both naturalized citizens and guests of America, natives of Dalmatia, the Dalmatian Islands, the Croat Coastlands, Istria, Trieste, Goritza, and Carniolia, assembled in public meeting in New York City, February 16th, 1919, have the honor to submit the following resolution for Your Excellency's consideration, and pray it may come before the President and the Peace Congress:

Resolved, That under pressure of the new peril threatening the liberty and lives of our home-people, we call attention to the following aspects of the situation which bear gravely not alone upon our people's happiness and security but also upon the interests of general peace.

If the Balkans have long been the scenes of turmoil and sanguinary strife, constituting a menace to the world's peace, it has been because of the continual attempts of outside greater powers to conquer those lands and subdue or exterminate their inhabitants. Those ancient foes have been eliminated as a result of the present war. But now in the person of Italy a new foreign would-be-conqueror appear on our shores. It lies with the Peace Congress to discourage and prevent this new invasion by not admitting the establishment of its first footholds upon our coasts.

We ask recognition for our Monroe Doctrine: *The Balkans for the Balkan Peoples!*

Application of that principle is in keeping with the recognition by President Wilson of our just aspirations for freedom in our own homelands and the official sanction pronounced by Secretary of State, the Honorable Robert Lansing, of the Union of Serbs, Croats and Slovenes in one State.

All we ask is the test under fair conditions of President Wilson's axiom of self-determination in Dalmatia, the Islands of the Eastern Adriatic, the Croat coastlands, Istria, Trieste, Goritza, and the districts claimed by Italy in Carniolia, that they may declare freely to which State they choose to belong. But if the people of these lands are denied unhampered expression of their will and prevented from choosing their own government, we believe that only the worst consequences could result.

Our trust is in the word of the President of the United States and in the wisdom and justice of the other Great Powers who have met to eradicate the causes of war.

6.

Letter addressed to the members of the Committee on Foreign Relations of the U. S. Senate on the occasion of the Committee's hearing in the matter of the Fiume controversy, and Versailles Treaty:

NEW YORK, August 30th, 1919.

Senator :

May I be allowed to submit the following suggestions in view of the hearing of representatives of Jugoslavs and Italians before the Senate Committee on Foreign Relations.

I speak concerning the Near East not as a theoretician or academically, but as one whose unceasing political work since 1894 has been made up of practical dealing with the hard facts of the case, and whose objects have been: (1) the expulsion of the Turks from Europe; (2) extension of the Serb borders down over the old Serb territories to include the Vardar Valley from the Struma to the Albanian border and the borders of Greece; (3) the break-up of the Austro-Hungarian Empire; (4) the inclusion of the whole Serb, Croat, Slovene people within one national and sovereign Yugoslav State formation, looking to an ultimate Balkan alliance to include every Balkan State and representing the principle of "*The Balkans for the Balkan Peoples.*"

The formula "the Balkans for the Balkan peoples" is clearly set forth in the following excerpts from the writer's outline for a foreign policy, which he submitted to the section of the Yugoslav people (Serb, Croat, Slovene), whose aim is a Republican form of Government for the new State:

The effective realization of the policy of the Balkans for the Balkan peoples requires a settlement of the Eastern Adriatic and the Aegean questions which will leave no loophole for future foreign intrusion upon our coasts. The *conditio sine qua non* of all stability in our Balkan region is the eradication once and for all, of political and economical interposition in our interior or exterior affairs by any power or nation foreign to the Balkan peninsula. The basic principles of our present and future policy must be:

(1) The establishment and recognition by the Great Powers of the basic axiom: *The Balkans for the Balkan Peoples*; a Monroe doctrine for the Balkans meaning the complete exclusion of any power not a national Balkan State from possessing any territory or coastline, or part of coastline, or island adjacent to or any part of, any shore of the Balkan peninsula or any of its seas, *i. e.*, including the Eastern Adriatic and Aegean Sea, or from claiming or acquiring any political or economic or other special rights or privileges on the territories, seas, waters, shores or islands of the Balkan peninsula.

(2) A perpetual economic and a defensive military alliance, based on the above axiom, between the Serb-Croat-Slovene Federal State and Greece. Into which alliance other independent Balkan States should subsequently be invited to enter.

(3) The recognition of Albania as a free and independent State under a chief executive who shall be a native Albanian and chosen freely by the Albanian people. The independence of this Albanian State to be guaranteed by the Alliance of the Serb-Croat-Slovene Federal State and Greek State, and into which alliance Albania shall enter as a third member.

In accord with this formula on February 16, 1919, in New York City, a large mass-meeting of Serbs, Croats and Slovenes by unanimous acclaim passed a resolution containing the following passages:

Resolved, That under the pressure of the new peril threatening the liberty and lives of our home people, we call attention to the following aspects of the situation which bear gravely not alone upon our people's happiness and security but also upon the interests of general peace.

If the Balkans have long been the scenes of turmoil and sanguinary strife, constituting a menace to the world's peace it has been because of the continual attempts of outside greater powers to conquer those lands and subdue or exterminate their inhabitants. Those ancient foes have been eliminated as the result of the present war. But now in the person of Italy a new foreign would-be conqueror appears on our shores. It lies with the Peace Congress to discourage and prevent this new invasion by not admitting the establishment of its first footholds upon our coasts.

We ask recognition of our Monroe Doctrine: *The Balkans for the Balkan Peoples*.

This formula in all its meaning and the obligations it imposes, has since been adopted as a basic principle by the political leaders and the statesmen guiding the destinies of the newly created state of the Serbs, Croats, Slovenes (Yugoslavia) and it has been approved and accepted by Premier Venizelos of Greece, who in a letter dated May 14, 1919, addressed to the writer expresses himself as follows:

Greece and Serbia have been fighting side by side against common enemies for the past seven years and our assured coöperation in the era of peace to come is bound to prove of the greatest value both to Greater Greece and Yugoslavia.

Further, Essed Pasha Toptane, the most important of Albanian leaders and chieftains, who *de facto* commands the allegiance of the great majority of the Albanian people, declared in an article published in the June number (1919) of the "Balkan Review" (London) that he and his

followers accept in full the formula: "The Balkans for the Balkan peoples, in all its meaning and all the obligations it imposes."

One word in regard to Bulgaria. It goes without saying that a final adjustment of the Balkans must include Bulgaria. But it cannot include a Bulgaria with as much foreign baggage as she carries at present. Only after a firm permanent defensive military and economic alliance shall have been concluded between Yugoslavia, Greece and a free Albania on the basis of the Balkans for the Balkan peoples, can admission into such an alliance be granted Bulgaria, when she shall have realized as hopeless her attempts to lay hands on Serb and Greek territory.

I understand that the questions before the Senate Committee on Foreign Relations are:

- (1) Yugoslav-Italian frontier.
- (2) Albania.
- (3) Thrace and Constantinople.

May I be allowed to remark that the solution of these three questions is fully covered by the formula: The Balkans for the Balkan peoples.

In that regard may I be allowed to say further, that the Balkan states are fully able to take care of their own affairs and do not need the guiding hand of any of the so-called great Powers; further, history from antiquity to the present day shows that (1) the international troubles concerning the Balkan States; (2) the internal or domestic troubles within the various Balkan states; (3) the mutual antagonisms between the Balkan states themselves, have always been, and are still due directly to intrigues fostered and instigated by one or another of the so-called great Powers for the purpose of conquests in Balkan lands. Hence, the absolute necessity in the interest of peace to exclude completely any power *not a national Balkan State* from possessing any territory, or coastline, or part of coastline, or island adjacent to or any part of, any shore of the Balkan peninsula or any of its seas, *i. e.*, including the Eastern Adriatic and Aegean Sea, or from claiming or acquiring any political or economic or other special rights or privileges on the territories, seas, waters, shores or islands of the Balkan peninsula.

A definition of the frontier line between Yugoslavia and Italy therefore becomes a defining of the limits of the Balkan peninsula towards the west.

In the Adriatic this frontier line must run so as to cut that sea into halves, leaving the Eastern Adriatic with all its islands and shores in the possession respectively of Yugoslavia, Albania, and Greece.

On land this borderline should be short and permit of easy defense, and follow the ethnographic division between Italians and Slavs as much as possible.

Such a line between Italy and Jugoslavia should follow the natural line of defense along the Carso Plateau east of the Isonso to the sea near Trieste.

This line is not far from the borderline proposed by the more moderate and sagacious Italian statesmen as outlined in the book by Maranelli and Salvamini: "La Questione dell' Adriatico," 2nd edition, 1919, page 11 (which book just out of press has been sent to the writer by a prominent leader of the radical party of the Italian Parliament):

e) *agregazione della Venezia Giulia all'Italia, con quel confine terrestre, che assegnando all'Italia verso l'est la minore estensione possibile de territorio slavo, crei la necessaria continuita territoriale fra Gorizia e Pola e dia una soddisfacente linea di difesa militare.*

The ideal line of defense for the Jugoslavs would be the line along the Carso Plateau east of the Isonzo and along the Isonzo reaching the sea near Duino and thence running across the Adriatic, cutting it into two, as I have above drawn it.

A concession however may be made to Italy making the borderline to run from the Upper Isonzo along the line of the Carso Plateau south to near Duino, thence parallel to the seashore, leaving the seashore to Italy, to a point somewhere north of Trieste and thence in a straight line southward to Cap Promontore, east of Pola, halving the Istrian peninsula, the western part of which would go to Italy, the eastern part to Jugoslavia. From Cap Promontore the frontier line to run southeastward cutting the Adriatic Sea into halves, leaving the Eastern Adriatic with its islands and shores to the Balkan states as above outlined.

This is the only kind of frontier settlement that would allow peaceful development in the Balkans and lead to friendly relations between the Balkan States and Italy. Any other borderline between the Balkan states and Italy is bound to lead sooner or later—and as I foresee, in the near future—to another catastrophe.

In regard to Thrace and Constantinople, I think best to cite the following passages of a letter of mine written in July last to Premier Veniselos of Greece:

My view is that the European part of the territory bounded by the European shores of the Dardanelles, Marmora and Bosphorus, including the islands of the Marmora and the isles commanding the entrance of the Dardanelles and the waters of those regions should be constituted into a self-governing territory, which must be dealt with separately and differently from the Asiatic shores and regions.

That European self-governing territory of Constantinople so constituted should be *either* under the administration of a High Commissioner serving one year, appointed in rotation by each of the States belonging to the Balkan Alliance; which in this case

would be under the obligation in common of defending that territory with their combined military forces. However, the provisions of this coöperation for the defense of the Constantinople District, should be formulated apart from and independent of any clauses contained in the articles of the Balkan Alliance.

Or, as an alternative, the High Commissioner of that Constantinople self-governing region could be the appointee solely of the Greek Government, in which case the military defense of the territory would be especially and solely the obligation of Greece.

In submitting the above considerations I beg to lay emphasis on the fact that the Balkan States are fully competent to manage their own affairs, and do not require the guiding hand of any of the so-called great Powers, an outside "guiding hand" has always meant perdition and always would. I will remark here that the Balkan Alliance, military and economic, based on the formula, "The Balkans for the Balkan peoples," in all its meaning and the obligations it implies, which has passed already the stage of sketchy outline, and should soon be an accomplished fact, represents a united front of about 23 million peoples (Jugoslavia, Greece and Albania) and ultimately plus Bulgaria; total of 28 million.

Therefore, to sum up I will cite again from the resolution passed on February 16, 1919, at the New York Yugoslav mass-meeting:

"If the Balkans have long been the scenes of turmoil and sanguinary strife, constituting a menace to the world's peace it has been because of the continuous attempts of outside greater powers to conquer those lands and subdue or exterminate their inhabitants. Those ancient foes have been eliminated as the result of the present war. But now in the person of Italy a new foreign would-be conqueror appears on our shores. It lies with the Peace Congress to discourage and prevent this new invasion by not admitting the establishment of its first foothold upon our coasts.

"We ask recognition for our Monroe Doctrine: The Balkans for the Balkan peoples.

"Meaning the complete exclusion of any power not a national Balkan State from possessing any territory or coastline, or part of coastline, or island adjacent to or any part of any shore of the Balkan Peninsula or any of its seas, *viz.*: including the Eastern Adriatic and Aegean Sea, or from claiming or acquiring any political or economic or other special rights or privileges on the territories, seas, waters, shores or islands of the Balkan Peninsula."

May I ask you, Sir, to be so kind as to lay this letter before the Committee on Foreign Relations and the Senate of the United States now called upon to pass on the treaties concluding the war.

Pray believe me, Sir,

Yours with respect,

LAZAROVICH-HREBELIANOVICH.

7.

*Excerpts from articles in "The New York Times," Magazine Section,
(a) from article entitled "Rumania a New Factor in War," September 3, 1916:*

The entrance of Rumania into the war at the very moment when the Allies at Saloniki are menaced by another disaster in the Balkans not less fatal in results than the Serb catastrophe of a year ago raises again the hopes of many that the war is entering its final stage. The same optimism was evident at the time of Italy's entrance into the war. Will Rumania better justify the hopes of the Allies than did Italy last year? The answer to this should be given in the next few weeks.

Much depends upon the conditions under which Rumania entered the war—her declaration of war was rather abrupt. Rumania's connections with Italy, and the speculations put forward in the European press, picturing the steps of speedy success, and, on the other hand, the seemingly puzzling depreciation of sterling exchange, indicate the pressure of underlying conditions not readily apparent to the man in the street.

In the minds of some persons close to the events there exists the question as to how far the entrance of Rumania at the present moment comes burdened with complications generative of future trouble. They fear that even should the hopes of the optimists for a speedy termination of the war be realized through the action of Rumania, the change may involve the birth of a new political combination, and a possible grouping of adversaries containing elements provocative of a new war hot on the heels of the present one.

The fact had better be faced squarely, that the world may well be in the first stages, rather than the last, of a period of wars.

The vast world entanglements that have caused these terrific explosions are largely the result of a stupendous world population, governed by amateur and mediocre statesmanship unable to cope with the ever-increasing international trade rivalries and schemes of political and commercial conquest.

It is a curious phenomenon of this war that it has not developed in either camp among the civil or military leaders of the nations any man of conspicuous force, either as statesmen or generals.

In Germany no man has come forward of the calibre of either Bismark or Moltke. However, on the Teuton side a marvelously wrought-out general organization goes far to supplant that deficiency. Among the Entente Allies the absence of commanding ability has even been more apparent and more deplorable in its results. In those lands there has not existed an efficient coördinated organism, and in all of those countries there have been apparent the vices of parliamentary clique, interference in statesmanship, and political interference of a fatal character with the military conduct of the war.

Due to the lack of genius in political and military leadership on the Teutonic side mistakes of grave nature have been more than once committed, and might have placed a decisive victory in the hands of the Entente group if they had been able to grasp the advantage. The Germans, because of their good machine, have more than once been near the attainment of a decisive victory, while the Allies, who in several fields have drunk deep of disaster, have never yet been near such a victory, if we except Russia in Galicia in the autumn of 1914 and spring of 1915.

To this lack of any powerful grip on the realities of international problems was due the Serbian catastrophe of last year. That disaster was not inevitable, either from a political or military point of view.

It was certainly not unknown to the powers that at the time of the making of the treaties prior to the first Balkan War—Bulgaro-Serb and Bulgaro-Greek—that Bulgaria not only received advice from Vienna, but made firmer an understanding which had long existed between King Ferdinand of Bulgaria and Vienna, an understanding which laid the basis for an Austrian aggression against Serbia in coöperation with Bulgaria during the first Balkan War. In August, 1913, before the conclusion of the Bucharest Treaty, Austria inquired of Italy whether that country, in view of the Triple Alliance, would support Austria in case the latter should attack Serbia. This statement was made by Giolotti in the Italian Chamber of Deputies. It was certainly not unknown to the powers that after the treaty of Bucharest new arrangements were concluded between Austria and Ferdinand of Bulgaria—arrangements which provided for Bulgaria's entrance into a campaign against Serbia, coöperating with an Austrian attack on the Serbs.

In spite of the knowledge that treaty relations of some kind existed between Bulgaria and Vienna, whose object matter was the conquest of Serbia, with the promise to Bulgaria of territory which the Entente Allies had not the equal power of assuring to her without the annihilation of Serbia, the Allies to the last hour clung to the fond hope that Bulgaria could be won to fight for the Entente. The moment the Serbian Government weakly allowed itself to be influenced to cede to Bulgaria the strategic region of Serb-Macedonia, the treaty between Rumania, Serbia and Greece was like a chain broken in the middle, and the wall of defense in the Balkans was down. Greece and Rumania thenceforth had no safer path than to shift for themselves separately, and were consigned perforce to a policy of opportunism.

In November, 1914, and again as late as August 30, 1915, within three short months of the final catastrophe, I represented the true situation to an acquaintance, a member of the British Cabinet and pointed out the importance of Serbia and the necessity of preserving intact the strategic region of Serb-Macedonia. I wrote the following words to that

acquaintance, who handed the letter to Sir Edward Grey, in a vain last attempt to prevent fatal action :

“I venture to draw particular attention to a fact which I think must be known to the Allied Governments, namely, that supplementary to all treaties and arrangements made between Bulgaria and Austria, and between Bulgaria and Germany, there has existed personal dynastic treaty, confirmed at the time of the erection of Bulgaria into a kingdom, a treaty still extant between Austria-Hungary and King Ferdinand of Bulgaria, and that was initialed by Germany. It must also be within the present knowledge of the Allied Governments that during the negotiations antecedent to the Balkan wars of 1912 of the treaties between Serbia, Bulgaria and Greece, King Ferdinand received suggestions and guidance from both Vienna and Berlin. If this dynastic treaty is kept in mind the evacuation of Adrianople by Bulgaria in 1913, and all the events between Serbia and Bulgaria since then will perhaps be more readily understood.

Without the possession by the Serbs of the Vardar Valley and its region, inclosing the natural defenses of Serb territory, there can be no independent Serbia. And the Serb State would perforce (however augmented in the West) become a vassal of Austria-Hungary and Germany.

Bulgaria, however much built up by the Allies, could never, because of her geographical situation, bar the way of the Teutonic armies to Suez and the Orient.

Had not the whole Serb people itself—that same people which as simple soldier in the trenches, rank and file of the army, refusing to further retire before the Austrian advance in December last, hurled forth that invader—had not the whole Serb people in arms understood Serb interests in the Vardar Valley and been able to repel the Bulgarian attempts at conquest in 1913, or, had the Serbs been unable to prevent their own Government from fulfilling the treaty giving those regions to Bulgaria, Serbia would have been today in Austrian hands and the German-Austrian armies would be now well on their way to Suez if not already in full control of the Eastern Mediterranean.

The present Bulgarian dealings are probably not intended to result in Bulgarian armed aid to the Allies, but are aiming at breaking all power of Serb resistance, thus obtaining from the Allies and the Serb Government, confirmation of what King Ferdinand has already obtained from the Germanic powers in return for the promise to open the road for them to Constantinople.

Serb submission to the demands of King Ferdinand of Bulgaria

would not attain any tangible advantage whatever for the Allies, but, on the contrary, that grave act would create complications in the Near Eastern situation of a nature disastrous to England, France, and Russia.

Why, therefore, should the Allies induce a Serb Government to cause its nation to wantonly commit suicide?

The following are extracts of a letter I wrote to a member of the British Government on November 20, 1915:

Had Serbia stood unshakable and been encouraged to do so, refusing to admit any Bulgarian justification to lay claims to the old Serb lands reconquered from the Turks by Serb blood alone, and including the points of strategic importance vital for the country's defense, it is almost certain that Rumania and Greece, not having any cause to fear Serb weakness, or collapse in the Serb part of the Rumano-Serbo-Greek bulwark, would not have hesitated to stand loyally by their joint conventions.

The demolished wall must be rebuilt. But the condition *sine qua non* of success forbids any temporizing or makeshift and exacts that all effort from the very start shall be within the frame of that thoroughgoing and far-reaching policy. Failing this, is failing all.

Despite the series of political blunders of the Allies, and incapacity at Belgrade, the disaster which overwhelmed Serbia could even then have been partly or wholly avoided with the proper use of the Serb army, and even a small measure of support rendered efficiently by Sarraill's forces.

A responsibility of the gravest nature rests upon the official, whoever he may be, who conveyed to Field Marshal Putnik deliberately misleading information as to the condition of affairs at Nish and Saloniki. This deception was extended to the public by the decorating of the town of Nish, ostensibly to celebrate the arrival of the French troops in that city, when it could not have been unknown to the Nish authorities that the French troops had only begun to land at Saloniki. The error conveyed to Marshal Putnik prevented that old general, veteran of three wars, from taking the measures he had planned for the immediate withdrawal southward to positions with Nish as key, where the Serbians could have faced both Bulgar and Teuton, protecting the line of communications with Saloniki and the south.

The operations of General Sarraill from his arrival at Saloniki would appear to be susceptible of but one of two interpretations. Either General Sarraill is an officer of singular incapacity, or he has been acting under orders from a political source conciously or unconsciously motivated

by considerations not in keeping with the avowed object of the Entente to overthrow the Bulgar-Teutonic enemy in that region.

If these views appear to be too frank or too strong, I would invoke the remembrance of the world to a nation martyred because of these blunders, and to the graves of many a brave young English lad and many a gallant French soldier, who might, perhaps be living today but for these errors.

Simultaneously with the entrance of Rumania we hear again the anxious question: "Will Bulgaria join us?" and the same fallacious dream of an Austria detached from Germany floats in some minds. Indeed, the whole delusion of the Entente Allies concerning Bulgaria and the ill-fated attempt to "win Bulgaria" was based on the old British policy, bred in the bone for a hundred years, of anti-Russianism, as well as influence in France remaining from the days when that country was the dominant power in the Near Orient. And, lastly, there was Russia's dream of Bulgaria as a Russian creation.

Considering the British difficulty, even in official circles, of suddenly escaping from the hold of the long-followed routine of anti-Russianism and pro-Austrianism, it was not surprising that when Sir Edward Grey, heading an enlightened section of political opinion, came to see the necessity of a reversal of the old attitude toward Russia and the value of an entente with that power, the British public was unable to divest itself immediately of old prejudices concerning the Slav empire, and that even an important part of the official world could not at once turn volteface to hate what it had esteemed, and esteem what it had hated.

These politicians could not from one day to the next put off the Bulgaro-Austro policies which had for so long influenced British action in the Balkans. This curious psychological phase of the situation tends to render credible the perfect sincerity of the Austrian and German astonishment at England's entrance into the war. It indicates the origin of the idea continually recurring like a leitmotif since the beginning of the war, that Bulgaria was ever on the verge of being brought to the side of the Allies. Even now at this hour the Entente organs renew attempts to wheedle or press Bulgaria into their camp. It must not be forgotten that the line of economic gravity of Europe stretching from the North Sea to Bagdad, Suez, and the Orient, and touching all the great industrial and producing centers of Central Europe, lies through the Balkans, passing through the heart of Serbia. Because of this great fundamental fact any unsound political construction in that region is merely the mischievous priming of new mines, which the touch of a child or an idiot could set off. So, too, political bargaining in the interest of local or momentary needs of the belligerents is in reality a surrender of principle and a confirmation of complications leading to future wars.

Skillful dealing with Sofia at this time in the interests of the Allies and of Greece would leave Bulgaria severely alone. If the Central Powers are able to make of Southern Rumania a second Serbia, they will do so with or without Bulgaria, who could not escape the German police grip in time to be of material aid. If, on the other hand, the Teutons are defeated, there is no need of Bulgaria and the Allies will come to the peace congress free of a whole world of dangerous complications that would have been Bulgaria's dower to them.

Italy's entrance into the war was greeted with the same optimistic cheers that now greet Rumania, but Italy's entrance has not proved of value to the Allies. That act, heralded boldly by Salandra as a step toward the attainment of Italy's "ancient aspirations," coupled with Sir Edward Grey's assurance to Italy concerning Slav-Dalmatia, had the effect of consolidating Austria-Hungary in her southern Slav districts. Before that moment the Austrian South Slavs could not be depended upon in battle against the foes of the Hapsburg house, either in the north or south; but against Italy, who entered the war not alone to regain Italian Trentino and Trieste, but with avowed aim of laying a new yoke upon the South Slav lands, these southern Slavs have fought as men fight for their country, and Slav regiments under the command of a Serb, General Boroyevich, have long been able to hold Italy at bay.

Therefore, the intervention of Italy has not strengthened the Entente Allies during their campaign, and has introduced into the Balkan imbroglio new elements of future strife.

To know the ultimate value of Rumania's entrance, granting in advance her success as a combattant in the war, it would still be necessary to know the nature of the arrangements between Italy and Rumania and the basis of conciliation between "the ancient aspirations" of each. Where will the Rumano-Italian combination be found in the ultimate groups of the Powers?

LAZAROVICH-HREBELIANOVICH.

(b) *From article entitled "Curious Political Paradoxes of the Great War," October 15, 1916:*

A Russian statesman said to me at the beginning of the European War: "Each of the Allies has his own particular iron in the big fire." These irons are apt to cross ends in the middle of that fire, for, if there are common objects to be attained by the Entente Allies, it is also true that they are engaged in a coöperative effort, the success of which would produce results undesired by some of them, results not only undesired but from the point of view of national interests entirely deplorable. Hence, certain paradoxes have swung into the Entente situation.

* * * * *

The Entente Allies command more than sufficient military forces, in men and treasure, to bring the war to a successful end, but the curious

conflict of political interests interferes with unity of aim and method. These circumstances have given to the Entente military operations the character of political chess moves among themselves, with the logical result of many military failures and an appalling waste of human material. Precious human blood which could be justifiable spilled where it would buy success in military operations is today poured out in dribbles, exhausting the lives of whole peoples in minor actions that are powerless to earn decision, however useful any local success in the trenches may be to the politics of the moment.

Political considerations interferring with, if not guiding, the military operations caused all the failures in the French campaign, the disaster of the Dardenelles, the catastrophe of the Serb campaign, the mismanagement of the Italian operations against Austria, and now the same pernicious influences are at work again in the Rumanian situation.

The operations about Saloniki fail to indicate the inexorable will of a united effort, although it is not denied that a successful offensive, based on Saloniki, is not even now beyond the pale of possibility. But such an eventuality would call for the united will to conquer and a manifestation of energy on a different scale from that witnessed heretofore.

Today the offensive moves around Saloniki bear all the characteristics of the so-called "reconnaissance en force" (powerful scouting raids), actions too weak to accomplish anything decisive, yet terribly expensive in human life. The reconnaissance en force, as is well known, is generally the last resort of a commander, who employs this means to veil the fact that he is at his wits' end.

The character of the campaign at Saloniki, involving useless wastage of life, is exemplified by the tragic spectacle of the Serbs. That small surviving force of about 70,000 heroes was, according to recently published communications from an Allied source at Saloniki, sent to its task with literally no hospital and ambulance equipment. However, inconceivable such conditions are, it is nevertheless a fact that the French Government, as American manufacturers attest, gave orders in the United States only some six weeks ago for about forty-five units, delivery of which could not be promised for a long period.

An eminent English political writer, J. L. Garvin, in an article published recently in New York, reveals an exceedingly interesting chapter of secret Entente politics in regard to the handling of Balkan matters. He states that for nearly a year prior to the final Serb catastrophe Lloyd-George, supported by other members of the British Cabinet, strongly urged that an efficient Franco-British army be sent into Serbia, but was unable to convert the French Government to that view until nine months later, when the hour of Serb destruction had already begun to toll. That measure was obviously the one dictated by purely military considerations. Its sole object was the defeat of the Teutons. The political conceptions

which opposed and prevented the accomplishment of that great action have proved their fallacy in every field of the war.

Those conceptions brought Italy uselessly into the arena, did not detach Hungary from the Teutons, did not secure Bulgaria as an ally, but did result in a series of bitter military and political defeats.

* * * * *

We know that the darkest hour is yet to come; we know that if that darkness is to be followed by the bright day of victory the able Generals—and there is a number sufficient to the task in the allied armies—must have an unhampered chance to secure the great decision, and the evils of political corrupt interference with the conduct of the war must disappear. Never before then can the day be won.

LAZAROVICH-HREBELIANOVICH.

8.

Letter addressed to Lord Northcliffe, discussing the military situation of the World War, as it was in spring, 1918:

NEW YORK, May 22nd, 1918.

My dear Lord Northcliffe:

* * * * *

A careful study of the conception of strategy as taught and practiced by the German and Austrian General Staffs in the war's events show that conception to be, that strategic military operations and political-diplomatic actions must as a consequence of our modern enormous mass armies go hand in hand, and that the ultimate and supreme guidance of both lie in the hands of the Chief-of-Staff in time of war, and that even in time of peace, the Minister responsible for Foreign Affairs must constantly take advice from the Chief-of-Staff. History of this war will in future point out step by step how the enemy was able by those means to have the initiative and up to this date the upper hand. To deal in detail with the current of events and point out in detail the various facts showing how local political passions and antagonisms in a country to be invaded, are exploited and catered to by the enemy, and how those are made to act on the initiative and decision of the general commanding the forces in the field, would entail the space of a book rather than a letter.

I know the actual situation only from the press accounts. From the reports of the tactical operations which have taken place during the last year or so it would seem that with the exception perhaps of mobility the troops are in hand; and such factors as strength, morale, etc., are not responsible for the present situation. Therefore, the responsibility for the non-understanding of the strategic situation and the non-seeing of the possibility of strategic operations which would lead to the defeat of the enemy must be sought elsewhere. As I have said in articles of mine published in 1916, the Teuton adversaries could have been defeated and thor-

oughly beaten by the armies then in the field—the British, French and Russians were then fully able to do so—even today it can be accomplished, I am convinced, by the forces at present in the field.

You need man-power more for defense than for offense, because if once your troops lack the spirit of advance and their mentality is impressed by that feeling of impotence to advance, and the adversary's ability to break their defense even momentarily, they are prone to seek safety in numbers. To remedy that psychological state of your troops by keeping a spirit of self-confidence alive by means of tactical attacks, costs too dearly in blood and fritters away the numerical strength. Nothing could have been more suicidal than the so-called "nibbling" system. Tactical actions even if successful are valueless unless they are within the frame of a properly understood strategic objective. Hence all blood shed in such actions is wantonly spilled. Under such conditions mere increase in numbers serves only to increase the butcher's bill.

No better example of the utter non-understanding of strategic principle can be given than the controversy—which was and is conducted with a military wisdom at once idiotic and tragic—and which was nicknamed as that between the "Westerners" and "Easterners." As if the importance of a theatre of war were determined by the point of the compass! Allow me in that regard to refer those gentlemen to the study of the campaign of 1800, in which the important theatre of war with the principal forces was considered to lie on the western front along the Rhine, and the Italian theatre was looked upon as of very secondary importance. A scratch army crossed the Alps and Italy became the theatre where the war was decided. The strategic operation decided it, and Marengo lost would not have changed the situation. To be more explicit, I would say that in this present war there exists only one theatre of war (operations) for strategic purposes; it comprises all the various fronts in Europe, and there is only one objective, and that is the defeat of the enemy in the quickest and most complete way, his destruction with the least cost in blood, and wherever that can be accomplished there is the principal theatre of war and the spot where the fate of the war will be decided.

In this war along the front line in Europe there is and has been only one sector of it that could be called of secondary importance, from the point of view of strategic offensive operations—Italy; but which, as defense, might likely today become of very great importance, as a successful thrust of the enemy west of the Adige and the Lago di Garda, may mean a monster Sedan for the Italian army. On the Italian front from the start a strategic offensive into Austria was a rather hopeless undertaking—such as it was conducted—in view of the road and railroad communications across the Alps at the disposal of the Austrian commander. This road and railroad system has been especially conceived and

constructed with the view of preventing any strategic offensive operation in the sense of the campaign of 1797—and also with a view to force an Italian offensive to restrict and spend itself in costly tactical actions—in such a way that a strategic counterstroke would always be possible. An idea which as events have shown proved itself to be the right one.

The Russian front line has, thanks to the revolution (so much hailed in England, France and America as a glorious achievement) been eliminated. The French front line in the West and the Eastern Balkan front line are of equal value. But in neither of these theatres have allied strategic operations taken place—and when I use the expression “strategic,” I use it in the proper sense and not as describing the kind of local operations which in the frame of the whole only belong to what might be termed “grand tactics.” In neither of these theatres have true strategic operations been initiated, at least I am unable to discover any signs of such.

In the Balkans a strategic offensive in 1915 would have ended the war with a victory for the Allies—and in my opinion provided that this offensive had been undertaken with the proper understanding and a capable general—not a Serrail or his kind—no other result could have been the outcome. Even a tactical defeat on one or the other point of that front for the Allies could not have changed the favorable result of such operations. A situation similar to that of 1800 in Italy would have been created. In 1800 even had Napoleon lost the battle of Marengo, the strategic advantages were his and he was the master of the situation; another battle would have given him the chance to drive the defeat home to his adversary—though perhaps not crushing him as Marengo did.

Today in that theatre of the Balkans the situation is somewhat changed, though a strategic offensive there is still possible, provided a general who understands is employed there, but the heavy costs of tactical strokes would have to be borne preliminary to the initiating and outlining of a strategic offensive which would promise success. The adversary looked to that, and politics helped him to an astounding degree to create the present situation.

On the Western front there is only one operative direction of proper strategic importance possible for either side—one operative direction for the Germans to crush the Allies—and for the Allies one to force the German evacuation of France and Belgium. For the German that operative direction is already outlined by the tactical offensive against the British front. But for the Allies, I have not been able up to now to discover anything which would indicate or outline any operation in the only strategic operative direction possible to promise great results and worth while the price in blood to be paid for such results, except perhaps the attempts made last year in the Champagne.

The weakest point of the whole German front is in the sector west

of Metz and Thionville up to the Meuse, lying to the north of Verdun. It is a kind of corridor traversed only by a relatively few supply communications, serving the German forces in the West—Belgium, Flanders, etc.—communications made difficult by the mountainous character of the country between Meziere-Thionville in the south and Liege in the north on the Dutch border. A great number of junction points are there grouped like very sensitive nerveganglia acting as centers for the inter-communication between Germany and the Western front. This triangle is at the same time a great industrial center of war production. Without entering into the details explanatory, this sector is the most sensitive point of the whole German front in the West, and any strategic penetration of the German lines in that sector must result in the withdrawal of the German forces from further west and probably the evacuation of Western Belgium and Western France.

Keeping this in mind the operations against Verdun by the Germans become exceedingly intelligible—especially if also it is not forgotten that Strategy and Tactics, as well as Politics in the broadest sense, belong to that realm covered by the term “Psychology.”

The German operations against Verdun were entirely devoid of strategic offensive character—they were tactical operations within the frame of a strategic defensive. Even a series of tactical successes against the French, forcing them to withdraw from Verdun, would not have changed necessarily the situation in general—aside of a kind of moral effect always the result of tactical defeat, but which effect can be overcome. The moral effect which these operations against Verdun were probably intended to produce on the French army and the nation in general, was attained by the Germans, though Verdun was not taken by them. They gained their point and possibly considered the price paid not too exorbitant. The slogan: *Ils ne passeront pas!* is the proof of it. The slogan ought to have been: *C'est nous qui passerons! et c'est la que nous les vaincrons!* Recently in a speech at the Yale Club I said just those words and added that the man who invented that slogan: *Ils ne passeront pas!* ought to have been shot, as giving aid to the enemy. For he formulated the objective probably desired by the German command, which was to impress just that defensive idea on the French mind, so hypnotizing them to the point of necessity of defense, leaving the initiative to the Germans and only passively resisting their offensive. It makes a great difference in the mind of troops to view the operations from the point of not permitting the enemy to execute his designs, instead of viewing them from the point of desire to impose their own aggressive will upon the enemy. And what happened? The French at Verdun sat on their glory of having held Verdun—and today when the Germans are preparing for a

knock-out blow in Flanders, nothing of importance is going on around Verdun.

An example of military history will illustrate what I am saying. At the beginning of the battle of Custozza, June 24, 1866, near Villafrance, the Italian Divisions Umberto were impetuously charged by the Austrian Cavalry Brigades Pulz and Bujanovich. These cavalry charges lasted about half an hour. The Austrian Cavalry suffered heavy losses, the Italians suffered practically no losses at all, but the offensive spirit of the Italian Divisions was broken for the day. They stopped their advance, did not go to the aid of the columns to their left in combat at Custozza itself, but even requested assistance, though in front of them were only the remnant of the two Cavalry Brigades with some Horse Artillery. This is an example in little; Verdun shows it big.

Any reason for the inactivity on that part of the front, must therefore, be sought elsewhere, either with the superior command or in the conditions of the troops. In any case the German hypnotic treatment applied at Verdun has acted and done its work.

I am perfectly aware, knowing the enemy's mentality, his reasoning, having learned it in his own war-schools, that he has taken all possible precautions against any offensive in that sector. Well and good, but has anybody yet made omelettes without breaking eggs? The tactical operations necessary to initiate a strategic offensive in that sector would certainly be very costly in blood, but they could not cost any dearer in the long run than all the small tactical operations undertaken during all those months for the gain of a few inches of ground. It would seem that those constant losses which extended over such long period of time did not shock the politicians at home and the people, as might possibly have done the same losses compressed into the space of a few days,—accompanied by a gain commensurate to them. Perhaps also it was feared that home-fabric could not stand up under a terrific shock of that calibre, and perhaps the commander himself hesitated to trust his own capacity. Or what?

To close my long epistle I desire still to make some remarks on the political point of the agitation of the Southern Slavs in Austria-Hungary. From all that is written on that subject it appears to be the basis of a great hope. Without wanting to deprecate the efforts of the various South Slav leaders—the Corfu arrangement, the Italian negotiations, etc.—I, myself a Southern Slav, who have had their liberation at heart all my life, desire here to put the whole matter onto a true basis. As agitation goes, any agitation if properly directed and the object of which can be attained—is right—but the object to weaken the enemy thereby must be attainable. There is no value in useless and wanton destruction of lives, which the agitation as it is conducted today will certainly bring about. The enlisting of Czechs and Southern Slavs—subjects of Austria.

—is a matter which I cannot quite approve in this moment. If something could be gained thereby I would not oppose it, but as the situation is, those men if taken prisoner will be shot, and the help they could give is not very great, and the idea to carry by those means an agitation into Austria is futile. The Czechs in Austria, as conditions are today, can do nothing. Russia is out of the field. The same is true of the Southern Slavs. Knowing my Southern Slavs of Austria-Hungary, not one of the so-called political leaders has any great hold upon them.

Before the entrance of Italy into the war the situation was favorable, and there would have been a reasonable basis for hope in a rising of South Slavs and Czecho-Slovaks. At that time I myself believed in the usefulness and value of raising a corps of Southern Slav volunteers, and I corresponded on that subject with Lord Kitchener and General Samuel Hughes of Canada. Coöperation of a Czecho-Slovak corps would also have been useful at that time. Especially in conjunction with an offensive through the Balkans. However, the circumstances in Italy's entrance into the war changed those aspects of the situation, and Russia's falling out made that change radical.

A successful strategic offensive in the Balkans in 1915 would have solved the riddle. Austria would not have been now in existence, the Slav centrifugal forces would have wrought that destruction. Even to-day a Balkan offensive would help in that direction, but the result could not now be foreseen as it could then.

As I have already said, the Teuton force can still be beaten—driven out of France, out of the Balkans, and out of Russia and Italy, using the armies as at present in the field, provided that the strategic situation is understood of which hitherto there has been no evidence.

Pray believe me, etc.

LAZAROVICH-HREBELIANOVICH.

Appended:

(a) *Excerpts from letter addressed by Lazarovich-Hrebelianovich to Captain C. C. Calhoun, Evans Building, Washington, D. C.:*

NEW YORK, April 12, 1924.

Dear Captain Calhoun:

* * * * *

A few days ago at the occasion of General Pershing's return the "New York Times" reprinted in an editorial the following passage from the General's report:

The Carignan-Sedan-Meziere line was essential to the Germans for the rapid strategical movement of troops. Should this southern system be cut by the Allies before the enemy could withdraw his forces through the narrow neck between Meziere and the Dutch frontier, the ruin of his army in France and Belgium would be complete. . . . From the moment the American offensive began

until the armistice, the enemy's defense was desperate and the flow of his divisions to our front was continuous.

I am enclosing here a copy of a letter of mine written on May 22, 1918, to Lord Northcliffe. On page 4 of that letter you will find underlined a passage, which for comparison I will here cite:

The weakest point of the whole German front is in the sector west of Metz and Thionville up to the Meuse, lying to north of Verdun. It is a kind of corridor traversed only by a relatively few supply communications, serving the German forces in the West—Belgium, Flanders, etc.—communications made difficult by the mountainous character of the country between Meziere-Thionville in the south, and Liege in the north on the Dutch border. A great number of junction-points are there grouped like very sensitive nerve-ganglia acting as centers for the intercommunication between Germany and the Western front. This triangle is at the same time a great industrial center of war production. Without entering into the details explanatory, this sector is the most sensitive point of the whole German front in the West, and any strategic penetration of the German lines in that sector must result in the withdrawal of the German forces from further west and probably the evacuation of Western Belgium and Western France.

. . . . On Fifth Avenue, on my way to the post office to mail this letter, I met the British General White, who was here as chief of the British Recruiting Mission. As I knew him we joined company. During our talk I mentioned the Northcliffe letter in hand. Very interested he asked me to let him read a copy of it. Afterward General White asked me to allow him to have copies made of it, as he wished to send them to General Bridges at Washington. General White, earlier in the war had been on the personal staff of Field Marshal Haig. . . . This incident induced me to send a copy of it to General Biddle, U. S. Army, whom I knew personally (and whose guest I had been in 1916 at West Point). The General was then I believe Chief-of-Staff of the U. S. Army. I had made General Biddle's acquaintance through my good friend General Leonard Wood, now Governor of the Philippines. As since the winter 1914-15 I had given great deal of effort to convert, through some British friends, the persons in England responsible for the conduct of the war, to these views of mine, I am naturally very interested to know how the plan of operations for the offensive in 1918 (autumn) was formulated and adopted. Do you know General Pershing?

* * * * *

Sincerely yours,

LAZAROVICH-HREBELIANOVICH.

(b) *Letter of Brigadier-General White to Lazarovich-Hrebelianovich:*

HEADQUARTERS
BRITISH AND CANADIAN RECRUITING MISSION
511 Fifth Avenue
NEW YORK, June 1st, 1918.

BRM 13 H-13

Dear Sir:

Thank you very much for sending me the papers which you promised to let me see. I have been greatly interested in them, especially in the copy of the letter to Lord Northcliffe, which I am sending to General Bridges for his perusal with the request that he will return it to me when read.

Very truly yours,

W. A. WHITE, Brigadier-General.

Prince Lazarovich-Hrebelianovich,
New York City.

9.

Project of Platform for the Yugoslav Republican Party, submitted to the Convention of the Yugoslav Republican Alliance, held at Cleveland (Ohio), U. S. A., in September, 1919:

I.

ORGANIZATION OF STATE.

1. The State formed by the territories inhabited by the Serb-Croat-Slovene Nation is to be one and indivisible, irrespective of previous boundaries.

2. For administrative convenience the S. H. S. State is to be divided into Self-governing Territories. These formations should be large enough to insure economic and political strength, and as far as possible, be based on homogeneity of traditionary habits and customs of the inhabitants. It is believed that these conditions could best be achieved by organizing the S. H. S. State into four such Self-governing Territories, as follows:

(a) A Slovene section, to comprise all the territories, coasts and islands inhabited by the Slovene branch of the Nation, up to the Isonzo River as the borderline of the Nation towards Italy.

(b) A Croat section to include the former Kingdom of Croatia and Slavonia, northern Dalmatia and the islands belonging to it, northwestern Bosnia, and the Baranja district beyond the Drava River.

(c) A West Serb section to comprise the former Kingdom of Montenegro, the southern part of Dalmatia and the islands belonging to it, Herzegovina, and the southeastern part of Bosnia.

(d) An East Serb section to comprise the territory covered by the Kingdom of Serbia, with boundaries essentially as in 1914, with Sreme, Banat, and Batchka.

3. The *Republican Form* of Government to be the form of the National Government and the governments of the four Self-governing Territories.

4. Each of these four Self-governing Territories to possess its own legislature and its chief executive, legislature and executive to be elected by direct ballot. The Chief Executives of these Self-governing Territories and their Cabinets—chosen by them—to be responsible to their respective legislatures and to the National Government.

5. The National Government to consist of a Chief Executive elected by direct ballot of the whole of the S. H. S. nation. He will be assisted by a Cabinet chosen by him, responsible to the National Parliament.

6. The Chief Executive is further to be assisted by a National Council, composed of twenty members, named by the legislatures of the four Self-governing Territories, five members from each respectively.

7. The Legislative Body or Parliament of the National State to be composed of representatives elected by the whole nation by direct ballot according to the population pro rata.

8. The affairs to be dealt with by the national Government to be: Foreign Relations, National Defense on land, sea and air, Commerce, foreign and interior, control of Education, Finance and Banking, Justice in all higher courts and all courts of Commerce, Labor, Railroads, Shipping on sea and inland waters, Post, Telegraph and Telephone, Forests, water-power developments, etc.

9. Each of the Self-governing Territories will deal with all matters of legislation and administration, within its own borders, that are not dealt with by the National Government.

10. The right to vote in the elections, local and national, shall be vested in all citizens of the S. H. S. State of sound mind, male and female, having attained the age of twenty-one years and who are engaged in productive occupation useful to the community, or who shall have to their credit past services to the nation or community.

11. The members of the National Parliament as well as those of the Territorial Legislatures, and of all other elected bodies, with the exception of the Chief Executives of the Nation and of the Self-governing Territories, shall be chosen by vocational groups and the elections held in vocational colleges within defined electoral districts. Each member so elected must actually be a practitioner of the vocation which elects him, with the exception of the Chief Executives of the Nation and of the Self-governing Territories.

12. All officers and men of the National army and navy or military

air forces, in active service; all others and men of the Constabulary (Gendarmes) or other form of military force of the Self-governing Territories, in active service; all officers and men of the municipal police forces in active service; all clerics, priests, ministers and ministrants of all kinds whatever belonging to any religion or religious sect—irrespective of sex and creed—shall be considered as consecrated wholly and exclusively to their respective characteristic duties and callings, in the free exercise of which they will be safeguarded from the turmoil and strife incident to political activity, and therefore, for their protection against such distracting and viciating influences they shall not take part in, or vote in any election of national, territorial, or municipal representatives or executives, or any other incumbents of public office, and they themselves shall not be candidates or elected to any such offices and shall not take part in any way in political activity. Further, no barrack or housing or precinct of the national army, navy or military air forces, the constabulary or other form of military force of the Self-Governing Territories, or municipal police, and no building or precinct devoted to any religious cult shall be used for any political purpose or activity.

II.

FUNDAMENTAL PRINCIPLES OF RIGHTS AND DUTIES.

General.

13. Every *right* has its corresponding *duty*. *Service* is the *measure of reward* and service shall be rewarded according to the measure.

14. The ultimate *aim* of all activity, private and public, personal and national, is the *development, use and growth* of all the *natural faculties* and abilities of the *individual*, under such conditions and to such extent that the individual obtains from that development and exercise of faculty, the maximum of enjoyment and good to himself and equally to his fellow human beings; the sum total of these individual experiences make up the normal *evolutionary advance* of a people.

15. This interpretation of *what constitutes worth* and value to the community, that is, *what is service* to the community and to the individual, should be the basis of all regulation affecting industrial, economic, commercial, cultural and political development.

16. As civilization, like individual projection, must continue ever to progress and perfect itself, laws must have only the relative amount of fixity that will meet with actual conditions they refer to, and must bear within themselves an evolutionary quality that recognizes *advance* as the general and dominant aim and is capable of continual adjustment and readjustment to the needs of perpetual betterment both material and moral.

Individual.

17. All citizens irrespective of sex and age shall have equal rights before the laws, the right to full protection in foreign lands and may not be delivered to any foreign government for prosecution or punishment. Shall have freedom of speech, freedom of faith and of public assembly, and inviolability of person and home. That inviolability shall not be infringed upon except through proper process of law.

18. The family is the bedrock of civilization and it is the duty of the State to protect marriage, home, motherhood and the child.

19. Special legislation shall provide means for the protection of motherhood and the protection of the child. The State shall provide conditions for the physical, mental and social development of the child and protect it against exploitation.

20. All schooling for the primary grades to the highest, including University, shall be gratis and open to both sexes.

Education shall be compulsory from six to fourteen years of age in the primary schools and up to eighteen in vocational continuation schools.

The State shall give full educational facilities to each community in accordance with its needs.

21. There shall be full religious liberty for the citizens and complete separation of Church and State.

III.

ECONOMICS.

22. Economic liberty of the individual and trade and business freedom to be safeguarded within the limits of a guarantee to every individual of wholesome, virtuous and happy conditions of existence.

23. National legislation must give effect to the principle that primarily the use of land is to give homes and nourishment to the citizens, whether as families or individuals and legislation shall provide means for distribution of land and for giving adequate aid to homestead settlers for the development of land and the building of their homes.

24. A minimum acreage sufficient to sustain a family together with the house and a corresponding sufficiency of tools, working animals and stock shall be inalienable.

25. The purely commercial exploitation of land and its ownership in large holdings cannot be vested in a single hand or a business corporation. However, the coöperative working of land by groups of homestead holders for increased efficiency of production is to be protected by legislation.

26. Industry must neither control nor enslave the community: its prime function is service to the community. Therefore, industry must

be conducted according to democratic and coöperative principles insuring equal opportunity to all its participants to develop and exercise skill, and to enjoy the equitable rewards of such skill or ability.

27. Unskilled labor, in all branches of production, must be assured a wage sufficient to provide it with proper living conditions. In regard to both skilled and unskilled wage earners, whatever be their occupation, the term "proper living conditions" must refer to provision for a wage earner's family of normal size.

28. The mineral resources of the soil, the forests, water rights, and all forces of power production in nature are the general property of the nation, which must provide means for their development and use for the general good.

29. All railroads, telegraphs, telephones and the Post to be national property and national services.

30. A system of economics shall be adopted for the development of the country in which the forces of production, distribution and finance enter on a basis of coöperation for the good of the whole people.

The impossibility of attaining efficient production either from industry or the utilization of the soil, can be found almost exclusively in the inadequacy of the distribution of products, the waste of both labor and material, and the inelasticity of credit, groups of causes intimately connected and mutually reactive upon each other.

As means of regulating the elements of this situation in a way to achieve as complete and thorough an exchange as possible representing a natural supply and demand, free from speculation, a nation-wide organization should be established representing banking resources on one hand and the producers on the other, by means of a general Clearing House system for both raw and manufactured products, combined with a warehouse system and a special financing system to place the whole financial resources of the country within reach of the producer, equalizing the distribution of staple raw and manufactured products and stabilizing the equilibrium between demand and supply in the open market, so as to first provide for fully satisfying the needs of the home demand before considering export demand, and creating a new medium of credit to facilitate exchange, permitting the expansion of currency, and also placing the currency on the sound basis of the actual resources and productive capacity of the country.

Legislation to give effect to this economic system will involve the placing of the national currency on the basis of the development of the country's resources and productive capacity without having recourse to foreign gold loans; the creation of a warehouse and clearing house system within the country, which could also serve as the medium of foreign export and import for the country; and reform of the country's banking and credit system, adapting it to those needs.

IV.

31. To maintain and uphold with all the nation's means and resources, the integral indivisibility of the Serb-Croat-Slovene State; and with all the nation's resources and powers, to maintain and uphold unimpaired the full and complete sovereignty and independence of the State. Not to acquiesce in, or permit, any acquisition or claim of acquisition by a foreign State or group of foreign States, of any political or economic or other special rights or privileges in regard to the State and Nation or any right to interfere or intervene in the country's internal affairs.

32. To obtain from the Powers recognition of the basis axiom: "*The Balkans for the Balkan Peoples*," meaning the exclusion of any power not a national Balkan State from possessing any territory or coastline, or part of coastline, or island adjacent to or any part of, any shore of the Balkan peninsula or any of its seas, or from claiming or acquiring any political or economic or other special rights or privileges on the territories, seas, waters, shores, or islands of the Balkan peninsula.

33. To foster and maintain with the other Balkan States relations of friendship, confidence and good will tending toward mutual understanding and harmonious action in common Balkan interests especially those affecting economic development and military defense.

34. In regard to the Italian frontier question, racial justice and national security demand that the borders on land between the S. H. S. State and Italy be the Isonzo River with the passes of Predil and Raibl, and, on sea, a line cutting the Adriatic into halves leaving the eastern half of that sea with all the islands and the whole eastern coastline to the Yugoslav State.

LAZAROVICH-HREBELIANOVICH.

IO.

NEW YORK, September 10, 1924.

To the Editor "*Belgrade Economic and Financial Review*,"

Kolartcheva No. 1, Belgrade, Jugoslavia:

Sir:

A few days ago the first seven numbers of your Review came into my hands. In going over them I noticed statements and statistical data, which I think require some attention.

Two of the articles treat of Yugoslav railroads, one signed by A. Panich, of the Ministry of Communications (January number, pp. 1-4); the other signed by R. M. Avramovich (February, pp. 6-10). The figures given in those articles for the route-mileage of the railroads and those giving the ownership extent—State or private—differ considerably.

A third version of railroad mileage I found on page 43 of a small pamphlet entitled: "*Economic and Financial Review*," which is signed by Prof. Nedelkovich, and was distributed by him when in America last spring as head of the Yugoslav Financial Mission.

Last year I had the occasion to make for some clients of mine a study of "Balkan communications, with special regard to railroads and shipping facilities." A short abstract of part of that study was published afterward in the statistical number of the American publication, "Railway Age" (January, 1924, pp. 123-128). The material put at my disposal bore all the marks of authenticity and was said to have been furnished by the respective government, railroad, and shipping executive-head departments. The material of which there was a great mass, was in Serbian, Bulgar, German, and French.

The route-mileage and ownership figures found by me in those so-called official data, are also at variance with each and all of the above-cited data.

The mileage of the 60-cm. gauge and 1-m. gauge lines included in the figures given by Mr. Panich, Mr. Avramovich and Prof. Nedelkovich, were omitted by me in my mileage figures for "Voll-bahnen" because the 60-cm. gauge lines were in those official data described as: "Decauville Military Field Supply Transport lines, with roadbed and substructures of temporary character," and the 1-m. lines were described as "Strassenbahnen."

Here are four different figures all presumed to repose on official and authentic data, which probably were not older than June, 1923, and not one figure agreeing with the other.

I would be much obliged to you if you could let me know which are the correct and authentic figures for the Yugoslav railroad mileage (Voll-bahnen) for July, 1923, and for July, 1924.

Reading Mr. Panich's, Mr. Avramovich's and Prof. Nedelkovich's discussion of the railroad situation forces upon the reader the strong impression that the pre-war mirage of political railroad construction and of concession hawking has still its fascination for those responsible for the development of the country's means of communications. It might perhaps be appropriate in this regard to cite the statement made in the late seventies by the then Hungarian Minister for Communications, in the Hungarian Parliament, defining his government's railroad policy: "We have no system to propose except that we have to build in as short a time as possible as many roads as possible, and if we have to choose a system, it will be that of low-cost roads, giving good and adequate transport facilities and allowing lowest possible freight and passenger rates."

The article: "Movement of grain in Central Europe," written by Mr. Poland in support of the so-called "Belgrade-Adriatic standard gauge road" (February, pp. 13-14) assumes that the task laid upon European railroads as public carriers is identically the same as that American railroads have to face. The only country in Europe in which conditions controlling railroad development are similar to those which guided the con-

struction and growth of American railroads giving them their particular character, is Russia. Central European trains rarely run on full paying load—the cars generally carrying quarter or half loads only. The average paying load of a train seldom exceeds 250 tons, and a 600-ton paying load is practically the maximum. Such conditions would bankrupt an American railroad built by necessity for extremely long hauls of car and train-load freights. Very instructive on that subject are the studies which were made twenty years ago in Austria on the alternative projects to either reconstruct the “Nord Bahn” from Vienna to Galicia for “Massenguter” transportation on American lines, or to construct a navigable canal from the Danube to the Vistula. Also the studies made fifteen years ago under the lead of the late Mr. Rathenau in Germany considering the reconstruction of the German railroads—especially those of the Ruhr district—for “Massenguter” transportation on American lines.

I think it may be of interest to give here a comparison of freight costs on the Danube River system with that on a railroad of easy grade.

Let us take the distance Zemun-Vienna, which, for river transportation and rail transportation is practically the same—795 kilometers.

The standard barge train on the Danube is composed of one tug and two barges of 600 tons burden each—total carrying capacity 1200 tons.

The railroad Zemun-Budapest-Vienna has a ruling grade of not over 0.5 per cent.; the service weight of heavy Hungarian freight engines is 77 metric tons; cars are of 10 metric ton paying load capacity, giving thus to a 60-car train a hauling capacity of 600 metric ton paying load.

For purposes of comparison assume the figure 1 is representing the cost per ton-kilometer (TK) for grain carried on water from Zemun to Vienna. Computing the corresponding figure per TK for grain hauled on the railroad from Zemun via Budapest to Vienna, on the basis of the pre-war freight rates on the Hungarian railroads—special tariff for grain in train and car loads—we obtain the figure 3.306 per TK grain carried by rail.

This figure 3.306 is composed of: (a) cost of transportation to road inclusive of cost of maintenance, 2.08278; (b) charge included in tariff rate to cover interest on capital investment, 1.22322.

The so-called standard gauge Belgrade-Adriatic Railroad located through countries having such peculiar valley and mountain formations as Bosnia and Hercegovina could not be constructed without prevailing grades of 1 per cent. with 2 per cent. maximum; not to mention the exceedingly costly and numerous works of art such line development would entail.

If we compute the probable figure for TK of grain carried on that projected road in respect to the assumed figure 1 for cost per TK of grain carried on barge on the Danube, taking the same Hungarian freight tariff

as basis, we arrive at a figure which is somewhere between 3 and 3.5, counting only cost of transportation to road inclusive of cost of maintenance, but exclusive of interest charge on capital investment.

To make it clearer I will place these figures side by side:

- | | |
|--|----------|
| (a) Danube barge per TK..... | 1 |
| (b) Rail Zemun-Budapest-Vienna per TK..... | 2.08278 |
| (c) Rail project Belgrade-Adriatic per TK..... | 3 to 3.5 |

A few words may be added in regard to the relation between grain prices and freight costs. I have before me a number of statistical tables covering the average monthly wheat prices (January, April, July, August, September, October) for the twenty-two years from 1887 to 1907, inclusive, of the grain markets of Prague, Budapest, Galatz, Odessa, Marseilles, etc. These tables show that the market prices at Budapest are invariably below those of Prague, the difference equaling the freight costs Budapest-Prague, the only exception being those years when there was a crop shortage in Hungary and grain had to be imported, as in 1897-98. The same will be found if the prices on the Galatz and Odessa markets are compared with those of the buying markets of Western grain importing countries.

The above-mentioned statistical tables and comparisons between cost of transportation on railroad, river craft, sea-going vessels, etc., belong to material gathered by me during the preliminary study of my Danube-Aegean waterway project (Morava-Vardar Canal project) referred to in your November, 1923, number, page 15.

Concerning the so-called Blair loan I find in the article of Prof. Mishich (January number, p. 19) the following passage: ". . . that a calculated and obstinate propaganda against our kingdom was the real cause of the failure of the loan of \$25,000,000 (twenty-five million dollars), etc., etc. . . ." May I, having been in America and followed the whole Adriatic Railroad and loan affair from its inception, be allowed to characterize that statement as "blatent nonsense."

Jugoslavia and Romania, two countries that have a rather extended and highly paid effort of propaganda here in their favor, with only so much of antagonism as such feverish and hectic controversial propaganda causes in reaction, have a very low credit-standing in this country, whereas Germany, Russia and Greece, countries which are the object of hot and fierce hostile propaganda, have good credit standing in America. Greece (especially since its change of government) and Russia are able to obtain here all the commercial loans they require for trade purposes. The commercial loans granted to Russia on long terms and easy conditions aggregate to some fifty million dollars during the last ten months. German public loans (municipal and others) have freely found a market here since the war, and any German loan will be taken by the public without

difficulty. To the question, Why is this so? I believe the answer can be found in Belgrade itself.

Pray believe me, Sir,

Yours very truly,

LAZAROVICH-HREBELIANOVICH.

II.

Letter addressed to the "New York Herald-Tribune," and published in that daily on October 12, 1924, under the caption:

THE PROBLEM OF MACEDONIA.

An Analysis of Its Territorial Relations to Bulgaria and Serbia.

To the New York Herald Tribune:

For some time the columns of American dailies have become the playground for dialectical fire-spitting on a question which for all practical purposes should be considered closed, namely, Macedonia, the famous rag-doll of pre-war days. May I merely state a few facts—a right which I may claim, having given a part of my life to finding a solution of that problem?

The Macedonian insurrection of 1903 exhausted the native Macedonian effort toward liberation from Turkey, and the agitation was taken up by outside organizations, supported partly by neighboring states, but principally by every great power that had ambitions to participate as heir to the moribund Turkish régime in Europe.

The two Balkan wars were fought. Bulgaria lost and Serbia won out. The Vardar Valley, cleared of the Turks by the Serb army, was returned to its ancient place as Serb territory. The enormous sums spent by Bulgaria during some fifteen years to propagandize that region for Sofia had gone up in smoke, together with Czar Ferdinand's cherished dreams of conquest and Balkan empire.

From the political point of view two facts alone concerning Macedonia are decisive: (1) Does Macedonia—*i. e.*, the lower Vardar Valley—belong geographically to the territory occupied by the Bulgar people, and does it form such an entity with that territory that its inclusion is a necessity to the independent development of a Bulgar state; or (2) does it belong geographically to the territory occupied by the Serb state prior to 1912, and is its incorporation a necessity for the development of a Serbian state?

The term "Macedonia" is applied to the lower Vardar Valley. It is separated from Bulgaria by the rugged mountain mass of the Rhodope, across which communications are few and difficult. The Bulgars inhabit the northern and southern slopes of the Balkan mountain chain—the southern part of the Bulgaro-Rumanian basin of the Danube—and the valley of the Maritza. Thus Macedonia does not form geographically an

integral part of the territory of Bulgaria, from which it is separated not by an artificial boundary line, but by a great natural mountain barrier. Hence the possession of Macedonia cannot be regarded as of vital necessity to the existence of an independent Bulgar state.

The Vardar drainage basin and the Morava drainage basin are a geographical whole of which the longitudinal valley from the Danube to the Aegean Sea is a part. The principal river bed of the Morava basin lies (in Serbia) through the northern part of that valley, whose southern part furnishes the principal river bed of the Vardar basin. This fact constitutes Macedonia an integral member of a geographical valley system one part of which formed the territory of the Serb state as it was prior to 1912. And its accession to the Serb state in 1913 gave to that state the southern part of that valley system. The military history of the Balkan peninsula amply shows that the possession of the Vardar basin is of the utmost importance for the defense and the very existence of an independent Serb state. Hence the acquisition and retention of Macedonia was and is to Serbia a matter of life or death.

These considerations will, I think, clearly show that the possession of Macedonia by Bulgaria could be of value to it only as a strategic base for the military conquest of the western half of the Balkan peninsula. Hence this desire can be only an expression of Bulgarian imperialism.

Serbia in Macedonia is no menace to the independent existence of a Bulgar state, but Bulgaria or any other foreign power in Macedonia would be a menace to Serb independence, as the military history of the Balkans amply testifies; therefore there can never be any question of the Serb people allowing the Vardar valley to be anything else in the future than it has been in the past—an integral part of Serb state territory.

The quicker this basic situation is realized by all concerned the better it will be for the peace and progress of the Balkan peoples and the world in general.

LAZAROVICH-HREBELIANOVICH.

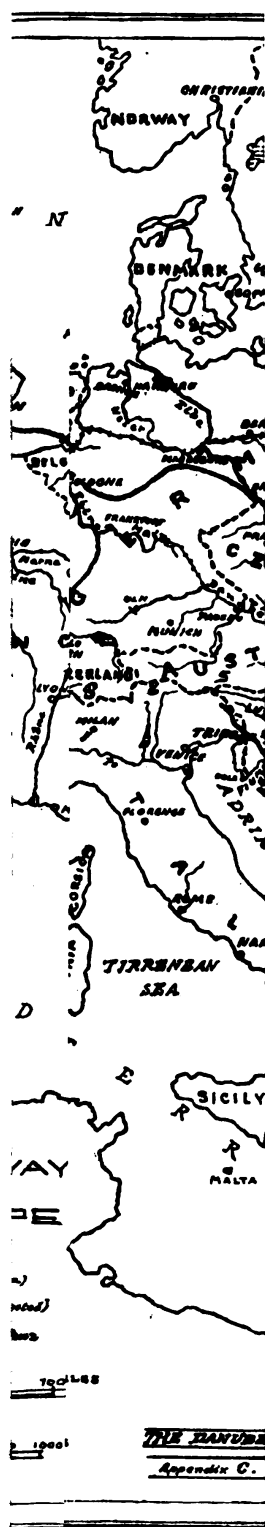
New York, Oct. 3, 1924.



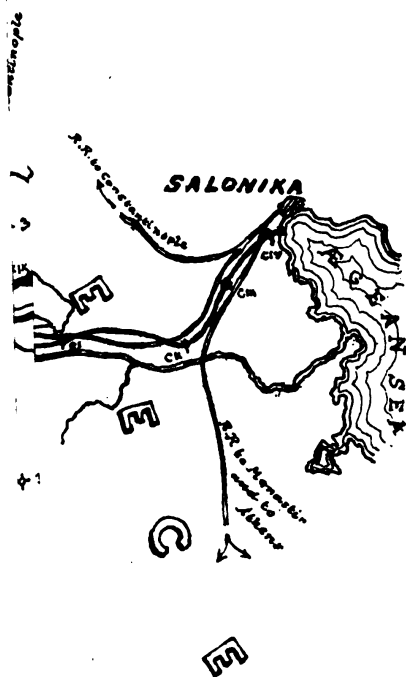
Armorial Bearings of Doushan-Stephan,
of Lazar-Stephan, and of Mara Odilia, De
Czernucki-Lazarovich-Hrebelianovich.

IV.

**MAPS AND PROFILES OF THE DANUBE-AEGEAN
WATERWAY.**







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